

County Borough of Northampton.

REPORT

ON THE

Health and Sanitary Circumstances

OF THE

County Borough of Northampton
FOR THE YEAR 1913.

BY

J. DOIG McCRINDLE,

Medical Officer of Health,
Supervising School Medical Officer,
Chief Tuberculosis Officer.

NORTHAMPTON :

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1914.

*To the Mayor, Aldermen, and the Councillors of the County Borough of
Northampton.*

GENTLEMEN,

I herewith present the Annual Report on the Health and Sanitary Circumstances of the County Borough of Northampton for the 53 weeks ended January 3rd, 1914.

The special points in the Report to which I have adverted at somewhat greater length than the others are the measures for the treatment of Tuberculosis, and the continued prevalence of Diphtheria.

Generally speaking the figures are scarcely so satisfactory as in the previous year, but during that year most of the figures were unusually low.

The staff of the Department has been increased by the appointment of the Tuberculosis Officer, the Special Foods Inspector, and a Junior Clerk, each of whom has found his time and services fully utilised.

The compulsory notification of all forms of tuberculosis, the new Tuberculosis Order under the Contagious Diseases of Animals Acts, and the Public Health (Milk and Cream) Regulations are the principal new enactments in force during the year which have required to be dealt with by the Department.

I have to thank the Council and its Committees for the consideration extended to me, my colleagues, and the various members of my staff for their cordial and loyal co-operation at all times.

I am, Gentlemen,

Your obedient Servant,

J. DOIG McCRINDLE.

*Public Health Department,
Guildhall, Northampton,
May 20th, 1914.*

CHIEF FIGURES. 1913.

ESTIMATED POPULATION	...	...	...	...	...	...	90,793
AREA IN ACRES	...	...	...	...	...	...	3,469
INHABITED HOUSES (estimated at middle of 1913)	...	...	...	...	...	...	20,228
DENSITY OF POPULATION (estimated at middle of 1913), 26.17 persons per acre 4.54 persons per house.	...	...	...	...	...	...
RATEABLE VALUE (end of 1913)	..	...	...	...	...	...	£402,274

BIRTHS.

MALES.	FEMALES.	TOTAL.	BIRTH-RATE.
943	925	1868	20.6

DEATHS.

MALES.	FEMALES.			TOTAL.		DEATH-RATE.		
596	584			1180		12.99		
Zymotic Death-rate	1.3
Infant Mortality	93.7
Death-rate from Pulmonary Tuberculosis	1.1
Death-rate from other Tuberculous Diseases	0.29

DEATHS IN EACH QUARTER.

	1909	1910	1911	1912	1913
First Quarter ...	399	330	337	293	360
Second Quarter	307	264	269	258	254
Third Quarter	233	243	325	211	223
Fourth Quarter	355	292	269	335	343
	1294	1129	1200	1097	1180

POPULATION.

POPULATION IN 1913. The mid-year population of Northampton in 1913, is estimated by the Registrar General from the last census figures to be 90,793. I have reason to believe that this is somewhat of an underestimate, but it is difficult to correct accurately, and I have accepted it as the approximate figure.

I find it impossible to estimate with any degree of accuracy the ward populations. Since the latter part of 1912, in consequence of the passing of the Northampton Corporation Act, 1911, the Borough has been divided into twelve wards. Previously, there were only nine, and at the time of the last Census the populations of these nine wards were enumerated, and no re-distribution has been made since the change. I have consequently no figures to go upon, and as the boundaries of most of the old wards have been changed, I cannot find any reliable basis on which to estimate the new populations. As it would be worse than useless to publish figures which are only vaguely approximate, I consider it better not to make the attempt. The value of knowing the ward populations is mainly for the purpose of estimating birth, death, and sickness rates in order that comparisons may be instituted between the present and past years. Owing, however, to the change in the wards, even if the approximate populations could be obtained, there could be no real comparison. As no useful purpose under these circumstances would be served, I have left the Table containing figures respecting the ward populations out of the Report.

The following Table shows the natural increase (excess of births over deaths) of the population in each year since the Borough was extended in 1901.

TABLE I.—NORTHAMPTON, 1901-1913.

NATURAL INCREASE OF POPULATION IN 1911, 1912, AND 1913, AND IN EACH OF THE YEARS OF THE DECENNIUM, 1901-1910.

Year (middle)	Population.	Births.	Deaths	Natural Increase of Population.	Natural Increase per 1,000
1901	87096	2345	1216	1129	13.0
1902	87397	2272	1294	978	11.2
1903	87699	2194	1219	985	11.2
1904	88002	2102	1185	917	10.4
1905	88306	1937	1159	778	8.8
1906	88610	1985	1061	924	10.4
1907	88915	1956	1151	805	9.05
1908	89223	2043	1131	912	10.2
1909	89534	1957	1294	663	7.4
1910	89843	1900	1129	771	8.6
1911	90152	1930	1200	730	8.1
1912	90467	1935	1097	838	9.3
1913	90793	1868	1180	788	8.7

BIRTHS AND BIRTH-RATE. The number of births registered during the year was 1,868. Of these 943 were of males, and 925 of females. The birth-rate was, therefore, 20.6 per 1,000 of the population. This is the lowest figure on record.

Table 2 will give some idea of the rapid and continuous decline of the birth-rate in Northampton, which it will be noted is much more rapid than that of the country generally. This is more graphically represented in the chart opposite.

Thirty-six years ago, in 1878, the Northampton birth-rate was considerably above that of the country and during this period it has rapidly declined, getting below that of the country in 1896, and keeping a considerable distance below the general birth-rate from that date onwards.

In the Registration District of St. Giles' there were 1,042 births, in that of All Saints' 730, and in that of Far Cotton 96 ; 89 of the births were illegitimate (4.77 per cent.). In St. Giles' district the proportion of these was 5.18 per cent., in that of All Saints' 4.38 per cent., and in Far Cotton 3.12 per cent.

The Registrar General states in a short summary given in his fourth quarterly report for 1913, with reference to the country generally, as follows : " The birth-rate in 1913 was 23.9 per 1,000 of the population, which is 0.1 per 1,000 above the rate in 1912, but lower than the rate in any other year on record. Compared with the average in the ten years 1903-1912, the birth-rate in 1913 showed a decrease of 2.4 per 1,000."

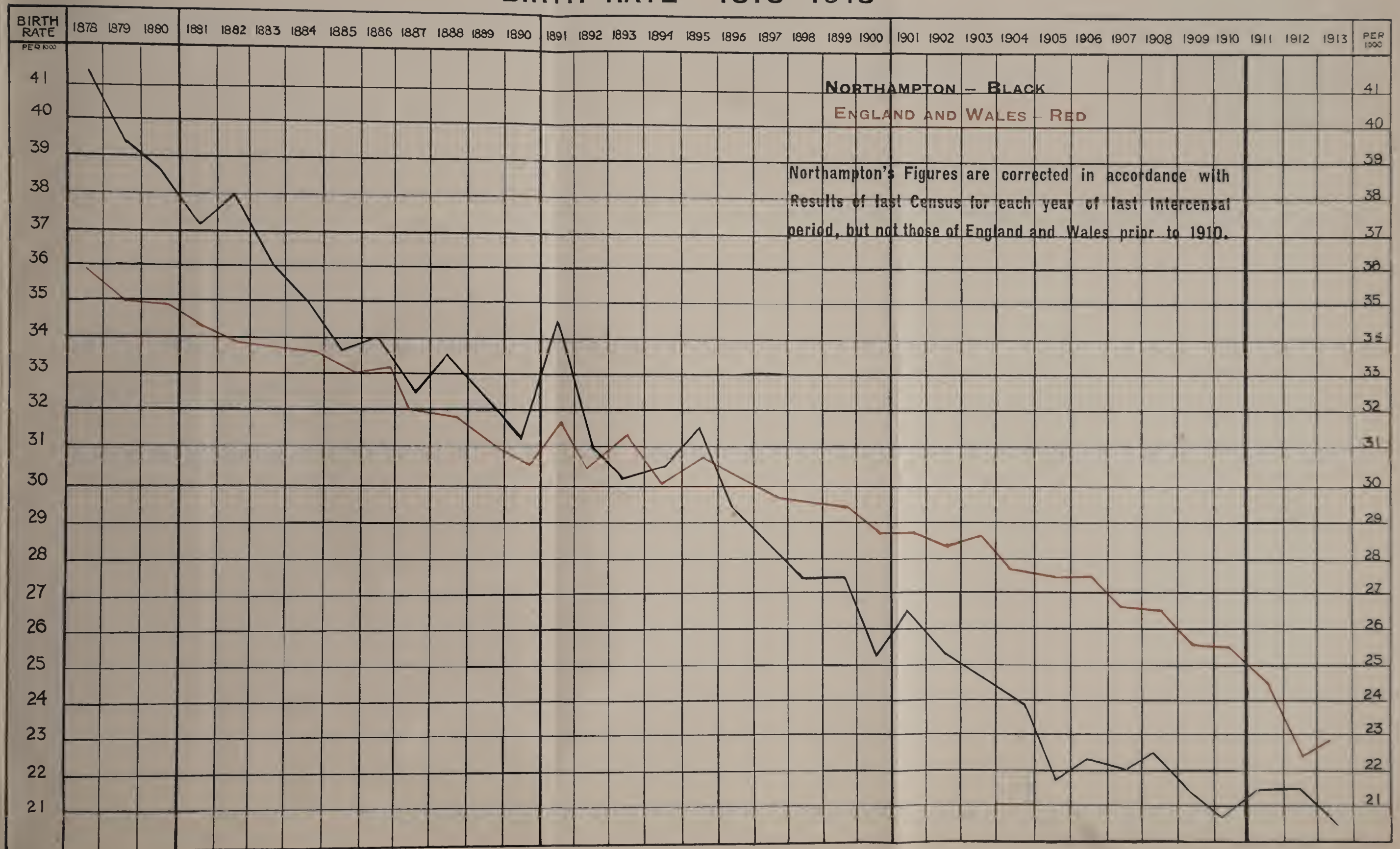
TABLE 2.—ENGLAND AND WALES AND NORTHAMPTON. 1903-1913.
BIRTH-RATE IN 1913, AND IN EACH YEAR OF THE DECENNium, 1903-12.

	1903	1904	1905	1906	1907	1908	1909	1910	1911	1912	1913
England and Wales	28.4	27.9	27.2	27.0	26.3	26.5	25.6	25.1	24.4	23.8	23.9
Northampton ...	25.0	23.9	21.9	22.4	22.0	22.9	21.9	21.1	21.4	21.4	20.6

DEATHS AND DEATH-RATE. There were registered during the year 1,180 deaths. This number includes most of the deaths of Northampton residents which occurred and were therefore registered, outside the area of the Town, and at the same time it excludes those deaths which occurred within the Town of residents from other districts. The information with regard to these is supplied once every quarter from the Office of the Registrar General, and they are technically known as " transferable deaths." The deaths of males accounted for 596 of the total, and of females, 584. The death-rate calculated per 1,000 of the population living was 12.99 (approximately 13 per 1,000) There was an increase of 83 on the number of deaths in 1912

There was a decrease in the numbers of deaths, as compared with the numbers in 1912, from Measles, Whooping Cough, Pulmonary Tuberculosis, Meningitis, Bronchitis, and Cirrhosis of Liver, while the deaths from Heart Disease, Pneumonia, Conditions due to Prematurity, and from violence, were increased, and more markedly so those from Diphtheria, Scarlatina, Diarrhœa, and Bright's Disease.

BIRTH RATE 1878-1913





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The chart opposite indicates graphically the difference between the death-rates in the country generally, and in Northampton, since the year 1876.

In reference to the death-rate of England and Wales, the Registrar General states, as follows: "The death-rate in 1913 was 13.7 per 1,000 of the population, which is 0.4 per 1,000 above the rate in 1912; compared with the average rate in the ten years 1903-1912, the death-rate in 1913 showed a decrease of 1.2 per 1,000."

CORRECTED DEATH-RATE. The age and sex distribution of the population in each town varies, and it is evident that towns containing a larger proportion of inhabitants on the extremes of life are more likely to have a greater number of deaths, other things being equal, than towns whose population is mostly made up of young adults; consequently if we are to draw anything like a fair comparison between the rates of different towns, these rates must be reduced to a common basis by adopting a standard of age and sex distribution. The standard adopted by the Registrar General is that of the country as a whole; and on this basis factors for correction have been worked out for each of the towns. The factor for Northampton since the last Census is 1.0133, and by this figure the crude death-rate has to be multiplied giving what is known as the "corrected death-rate."

The Registrar General gives the following corrected death-rate figures, which are appended for comparison:--

England and Wales	...	...	...	...	...	...	...	13.4
96 Great Towns (including London)	...	...	...	...	...	...	...	14.7
145 Smaller Towns	...	...	...	...	...	...	...	13.0
England and Wales (less than 241 towns)	...	...	...	...	...	...	...	12.1
London	...	...	...	...	...	...	...	14.2
Northampton	...	...	...	...	...	...	...	13.2

OBSCURE DEATHS. By this term is meant those deaths which are either certified by the Coroner, or remain uncertified. There were 71 of the former, and 10 of the latter, during 1913, and the percentage, therefore, of those deaths uncertified by medical practitioners was 6.86.

INFANT MORTALITY. As explained in previous reports, this figure is obtained independently of the population. It signifies the number of deaths registered amongst children under 12 months of age per 1,000 births

registered during the year. In 1911, there was a high Infant mortality, not only in Northampton, but in the country generally. This was undoubtedly, in large part at least, due to the climatic conditions. It was a hot, dry year, and it was very fatal mostly, as is usual, in the third quarter. At this time the chief fatal disease of infancy is summer diarrhoea, and the high mortality in 1911, was undoubtedly due, in large part, to this. The year 1912 on the contrary was a cold and wet year especially during the early autumn. The deaths from summer diarrhoea were, therefore, very greatly reduced, and the effect on Infant mortality was seen by a great reduction unparalleled in local history. The Infant mortality in 1912 fell to 72.3 per 1,000 births, from the previous year's figures of 130. In 1913, again the conditions approximated more nearly to those of 1911 than to those in 1912, and at the same time the Infant mortality rose. It is gratifying, however, to be able to state that the rise was nothing like so great as the previous fall had been, and the figure compared favourably with most other localities as the next table will show.

TABLE 3. ENGLAND AND WALES AND NORTHAMPTON, 1912-13.
INFANT MORTALITY. COMPARISON BETWEEN THE YEARS 1912 AND 1913.
(From the figures of the Registrar General).

	INFANT MORTALITY.		
	1912	1913	Increase
England and Wales	95	109	14
Great Towns (including London)	101	117	16
Smaller Towns	98	112	14
England and Wales (less the Towns)	86	96	10
London	90	105	15
Northampton	72	94	22

The outbreak of measles and its sequelae at the beginning of the year which formed a continuation of the outbreak mentioned in my last year's report, accounted for a part of this increase, but the chief cause was Diarrhoeal diseases, to which was due nearly 20 per cent. of the total mortality. There were 175 infant deaths in 1913, compared with only 140 in the previous year, and the Infant mortality was 93.7 compared with 72.3 in 1912.



INFANT MORTALITY 1878-1913

NORTHAMPTON BLACK AND ENGLAND AND WALES - RED

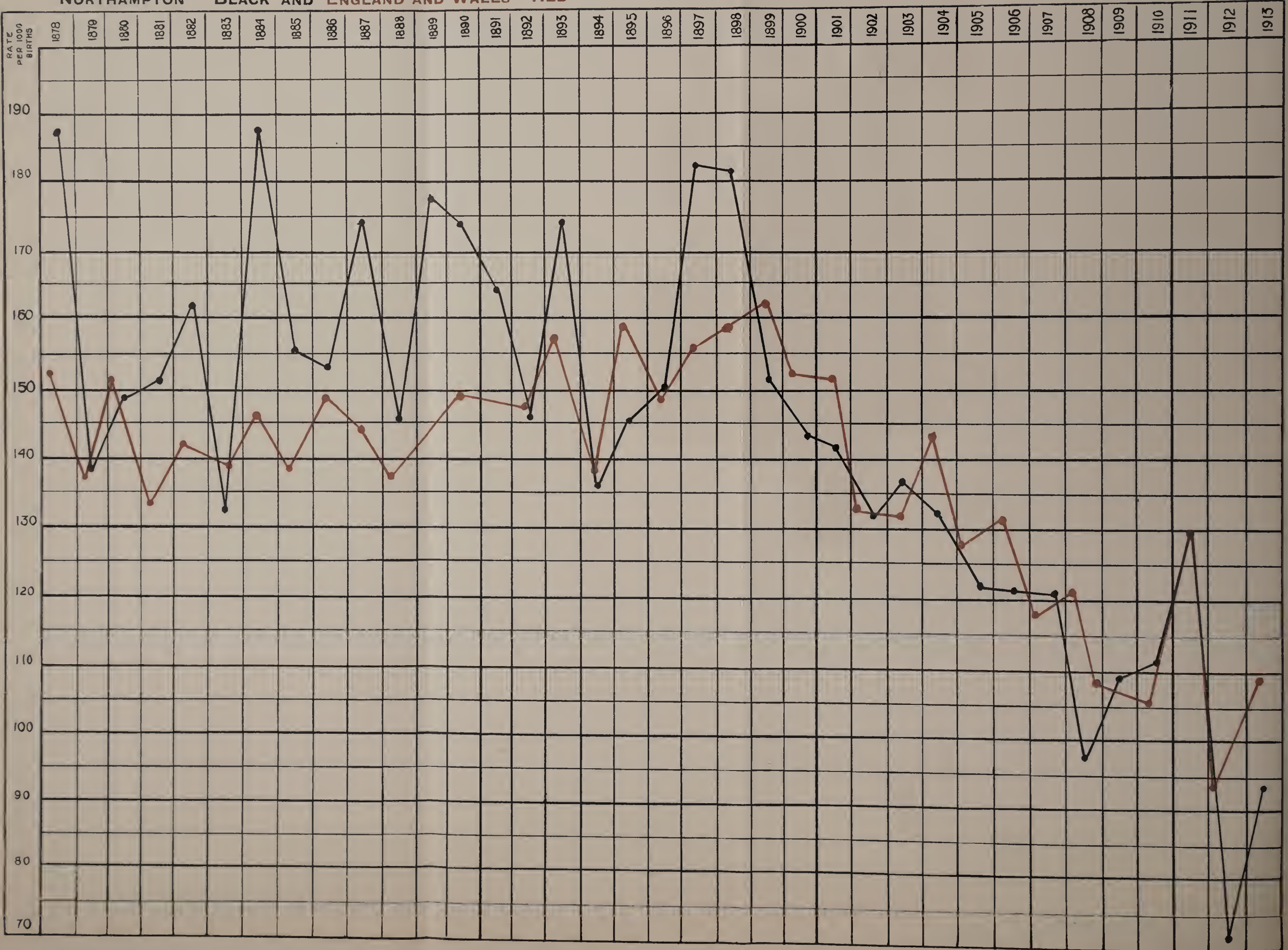


TABLE 4. NORTHAMPTON. 1881—1913.
BIRTH-RATE AND INFANT MORTALITY DURING THE THIRTY-THREE YEARS,
1881—1913.

Year.	Birth-rate	Infant Death-rate.	Year.	Birth-rate	Infant Death-rate.
1881	37.2	150.3	1896	29.4	150.6
1882	38.0	161.8	1897	28.6	184.3
1883	36.0	132.2	1898	27.7	181.2
1884	35.2	186.3	1899	27.3	151.4
1885	33.6	155.1	1900	25.2	144.8
1886	33.9	153.5			
1887	32.4	174.8	1901	26.9	142.4
1888	33.5	146.3	1902	26.0	132.4
1889	32.9	176.4	1903	25.0	137.2
1890	31.7	174.7	1904	23.9	132.7
			1905	21.9	123.4
1891	34.5	164.2	1906	22.4	120.9
1892	30.6	145.4	1907	22.0	120.1
1893	30.0	173.1	1908	22.9	96.9
1894	30.3	136.1	1909	21.9	109.9
1895	31.5	145.8	1910	21.1	110.0
			1911	21.4	129.5
			1912	21.4	72.3
			1913	20.6	93.7

Average 161.1

Av'ge 157.7

Average 122.6

The foregoing table shows the Northampton figures for each of the past 33 years, and the chart opposite the comparison between the local and the national figures

In 1913, the mortality was 21.4 per 1,000 above that of the previous year, but 21.6 below that of the average annual rate for the preceding decennium.

Table 5 gives some idea of the reasons of the increase in the figure for 1913. The increased number of deaths due to premature birth and to the conditions known as marasmus, inanition, debility and atrophy, which are usually due to immaturity, contribute along with diarrhoeal diseases, to this result more than any other condition. This is also clearly shown in Table 6, where not only the numbers but the proportions are given.

TABLE 5. NORTHAMPTON, 1903—1913. INFANT MORTALITY.

CAUSE.	1903	1904	1905	1906	1907	1908	1909	1910	1911	1912	1913
Marasmus, Inanition, Debility & Atrophy	55	54	51	53	54	42	42	34	41	23	27
Convulsions	29	29	20	17	14	17	17	6	7	6	10
Bronchitis and Pneumonia	56	26	45	14	47	48	27	27	36	26	20
Whooping Cough	14	2	9	3	4	11	...	13	2	7	4
Measles	4	1	6	...	9	...	3	7	...	8	9
Premature Birth	52	55	26	30	30	37	45	50	38	31	42
Diarrhoea, Enteritis and Gastritis	47	60	39	68	31	23	36	31	82	12	36
All other causes	44	52	43	55	46	20	45	41	44	27	27
TOTAL	301	279	239	240	235	198	215	209	250	140	175
TOTAL BIRTHS	2194	2102	1937	1985	1956	2043	1957	1900	1930	1935	1868
INFANT MORTALITY	137.2	132.7	123.4	120.9	120.1	96.9	109.9	110.0	129.5	72.3	93.7

TABLE 6. NORTHAMPTON 1913.
INFANT MORTALITY. DEATHS FROM CERTAIN GROUPS OF DISEASES

	Number.	Proportion per cent.
Common Infections	14	8.0
Diarrhœal Diseases	34	19.4
Premature Birth	42	24.0
Wasting Diseases	27	15.4
Tuberculous Diseases	1	0.6
All Other Causes	57	32.6
Total	175	100.0

TABLE 7.—NORTHAMPTON 1913.
INFANT MORTALITY IN EACH OF THE MUNICIPAL WARDS DURING THE YEAR.

	Abington	Castle	Delapre	Kingsley	Kingsthorpe	North	South	St. Crispin	St. Edmund	St. James'	St. Lawrence	St. Michael	Borough
1913.....	54	129	61	62	77	109	158	70	68	64	115	77	94

Of the 175 infant deaths registered, 72 (about 41.14 per cent.) occurred under the age of one month, and, as I have repeatedly stated, were thus due largely to causes operating previous to the birth of the child. Generally speaking such children are immature, and hardly fitted for a separate existence. It is consequently almost impossible to reduce this number by efforts directed to the improvement of the child's environment after its birth. It is necessary, therefore, in most such cases, to direct our efforts towards the improvement of the circumstances which precede the birth. This is a subject which is engaging widespread attention at the present time, and in Northampton, as will be mentioned later when dealing with the Notification of Births, our efforts are, to some extent, being directed to this work. More particularly, however, up to the present, we have been devoting our energies to the children over one month of age, and in the following table, for this reason and for the purposes of comparison, the information in regard to the deaths of children which occurred before the age of four weeks is omitted.

The circumstances in connection with the deaths of 98 infants over one month of age were investigated, and to this number must be added six deaths from diarrhoeal diseases of children between one and two years of age. The following figures thus refer to 104 deaths of infants over one month old. Of these, 39.4 per cent appear to have been solely breast-fed up to the eighth or ninth month, or to the time of death, if this occurred before that age, and 30.8 per cent. seem to have been entirely hand fed ; the remainder being usually fed partly by hand, and partly in the natural manner. Of the solely or partially hand fed, about 65.1 per cent. used the boat-shaped bottle, which though necessitating a little more trouble is by far the more cleanly. This percentage is an improvement on that of the previous year.

Table 8 is necessary for comparison with the similar table in previous years' reports, and gives particulars of the environment of those infants over four weeks of age who died of certain specified diseases.

TABLE 8.—NORTHAMPTON, 1913.

INFANT MORTALITY. PARTICULARS OBTAINED ON INVESTIGATION OF CASES WHICH DIED OF CERTAIN SPECIFIED DISEASES.

Disease.	Feeding.				Bottle.			Physique.			House.			Circumstances.		Total No. of Investigations.
	Breast only	Bottle only	Breast then bottle	Breast and spoon	Long tube	Boat shape	Milk boiled	Good	Fair	Poor and Puny	Clean	Fairly Clean	Dirty	Comfortable	Poor	
Marasmus ...	2	6	6	1	4	8	9	9	2	4	12	3	...	13	2	15
Convulsions ...	4	1	3	...	1	3	3	7	1	...	7	...	1	5	3	8
Pneumonia ...	5	1	1	...	...	2	2	4	2	1	6	1	...	6	1	7
Bronchitis.....	2	4	1	1	2	3	5	5	1	2	4	4	...	7	1	8
Diarrhoeal Diseases ...	11	14	11	1	6	19	19	25	12	...	16	18	3	26	11	37
	24	26	22	3	13	35	38	50	18	7	45	26	4	57	18	75

NOTIFICATION OF BIRTHS. The Notification of Births Act has been in force in Northampton since August, 1909. This Act requires the notification to the Medical Officer of Health of every birth in the Borough within 36 hours of its occurrence, by the father of the child in the first place, and failing him, by the person in attendance (doctor or midwife) on the mother at the birth. The next Table shows for comparison, the actual number of births which took place, the number of births registered, and the number which were notified, during 1913.

TABLE 9 NORTHAMPTON, 1913.

COMPARISON BETWEEN THE NUMBER OF BIRTHS WHICH ACTUALLY TOOK PLACE DURING 1913, WITH THOSE WHICH WERE REGISTERED AND THOSE WHICH WERE NOTIFIED DURING THAT PERIOD.

	M.	F.	TOTAL.
Number of Births which actually occurred	966	916	1882
Number of Births registered	943	925	1868
Number of Births notified	922	891	1813
Number of Live Births notified	893	852	1745

It will be found from perusal of the foregoing that 92.7 per cent. of the live births which occurred during the year were notified in accordance with the terms of the Act, and that 68 still births were also notified.

The sources of the notifications are given in Table 10.

TABLE 10. NORTHAMPTON, 1913.

NOTIFICATION OF BIRTHS. SOURCES OF NOTIFICATION.

From whom received.	Number.	Proportion per cent.
Medical Practitioners... ..	761	42.0
Certified Midwives	970	53.5
Parents	66	3.6
Others	16	0.9
Total ...	1813	100.0

The main part of the work of the two Health Visitors of the Department consists in endeavours to deal with the causes of Infant Mortality, and they are given very great assistance through the medium of the Notification of Births Act. This early information affords a means by which it is possible to visit many of the mothers immediately after they leave the care of their attendants at confinement, and to begin as early as possible the instruction and assistance in mother craft, which is so often necessary in the interests of child life. The period of lying-in usually lasts for at least ten days, and during this time, unless in exceptional cases, the mother is left to the care of those in attendance, who, in this locality at least, are nearly always medical practitioners or midwives; and it is usually after this period has elapsed that the Health Visitors take up the work of supervision. In 62 of the notified cases, however, it was deemed desirable for various reasons to visit earlier than this. This figure represents about 3.4 per cent. of the cases notified, and is a slightly lower proportion than in the previous year.

The total number of visits paid to households from which a birth was notified was 3,116, about 28 more than in 1912; the visit in the case of twins being only counted as one. 1,359 of these were first visits, and 1,757 subsequent visits. The total number of notified births visited was 1,375, and this is the figure in reference to which the succeeding analysis is given, and not to the total number notified. This figure includes 33 notifications received at the end of 1912, which were not dealt with until the beginning of 1913, and excludes 65 births notified during the last few days of 1913, and not visited till the year was over.

Table II gives as in former years the number and the classification of those births notified during the year which formed the subject of investigation.

TABLE II. NORTHAMPTON, 1913.

NOTIFICATION OF BIRTHS, NUMBER AND CLASSIFICATION OF THOSE BIRTHS NOTIFIED DURING THE YEAR, THE CIRCUMSTANCES ATTENDING WHICH WERE THE SUBJECT OF INVESTIGATION.

Classification.	LIVE BIRTHS.								STILL BIRTHS.							
	MATURE.				PREMATURE.				MATURE.				PREMATURE.			
	Sing'le.		Multiple.		Single.		Multiple.		Single.		Multiple.		Single.		Multiple.	
	Legit.	Illegit.	Legit.	Illegit.	Legit.	Illegit.	Legit.	Illegit.	Legit.	Illegit.	Legit.	Illegit.	Legit.	Illegit.	Legit.	Illegit.
	1177	55	23	—	59	3	8	—	24	—	1	—	22	3	—	—
	1232		23		62		8		24		1		25		—	
	1265				70				25				25			
	1325								50							
Totals.	1375															

These births form nearly 76 per cent. of the total number notified, and represent 1,359 separate confinements. 349 of these were first confinements (25.7 per cent.). The proportion of still births is represented by 3.6 per cent., although I have reason to believe that this is an understatement, and I do not think that the notification of still births is yet complete. 6.9 per cent. of the births represented in the above Table were premature, and 2.3 per cent. of the cases were twin births. The proportion of illegitimate births was 4.2 per cent. of the total. On inquiry it was found that 129 of the mothers (9.5 per cent.) were employed outside the house until within two months of confinement, and in most cases these intended to return to work as soon as they could afterwards. Ten of these mothers gave birth to still-born children (half of this number being premature), and of the 119 children born alive to them, 12 were before full time.

The following is a tabular statement of the foregoing information for each of the complete years since the Notification of Births Act, was adopted.

TABLE 12. NORTHAMPTON, 1910-13.

NOTIFICATION OF BIRTHS. COMPARISON OF CERTAIN FIGURES SHOWING
THE CONDITIONS IN THE FOUR YEARS, 1910-14.

	1910		1911		1912		1913		FOUR YEARS 1910-1913	
	Number.	Per cent.	Number.	Per cent.	Number.	Per cent.	Number.	Per cent.	Number.	Per cent.
Total number of cases investigated	1352	72.3	1472	77.2	1466	78.0	1375	75.8	5665	75.8
Still Births ...	62	4.6	66	4.5	55	3.8	50	3.6	233	4.1
Premature Births	91	6.7	87	5.9	84	5.7	95	6.9	357	6.3
Multiple Births	46	3.4	51	3.5	36	2.5	32	2.3	165	2.9
Illegitimate Births	54	4.0	76	5.2	70	4.8	58	4.2	258	4.6

The Nurse found on her first visit that 43 of these children had died already (3.1 per cent), and 110 (8 per cent.) were being wholly or partially fed artificially. It is gratifying, however, to find that this latter proportion is only about half that of the previous year. There is no doubt that, especially in the poorer neighbourhoods, it is a harder task to keep the infants alive and healthy when deprived of their natural food (breast milk), as the circumstances under which hand feeding is thus carried out render this an extremely risky procedure, especially during the hot, dry months of the late summer. In considering the circumstances in which the households referred to in Table 11 were living, it was found that in 355 cases, the members of more than one family were living together, though in many instances the families were related. This represents a proportion of 27.3 per cent. compared with 27.5 per cent. in the previous year's report. The case of illegitimate births is not included in these figures. There was an average of more than two persons in each sleeping room in 594 instances (45.7 per cent.), and in 202 cases there was an

average of more than three persons for each sleeping room (15.5 per cent.). These figures are very similar to those of the previous year, as will be seen from Table 13.

TABLE 13. NORTHAMPTON, 1910-13.

NOTIFICATION OF BIRTHS. COMPARATIVE FIGURES SHEWING FOR THE FOUR YEARS 1910-13, CERTAIN CONDITIONS IN THE HOUSEHOLDS OF INVESTIGATED CASES.

	1910	1911	1912	1913	FOUR YEARS 1910-13
Number of Investigations*	1329	1446	1378	1301	5454
Instances in which mem- bers of more than one family were living to- gether	194	277	379	355	1205
Proportion of such	15.2%	20.2%	27.5%	27.3%	22.1%
Instances in which there were more than two per- sons per sleeping room	537	645	668	594	2444
Proportion of such	40.4%	44.6%	48.5%	45.7%	44.8%
Instances in which there were more than three persons per sleeping room	174	205	217	202	798
Proportion of such	13.1%	14.2%	15.7%	15.5%	14.6%

*This corresponds to the number of separate confinements in which the circumstances were investigated exclusive of cases of illegitimate births.

There is indication of a very slight improvement in the figures for 1913, compared with those of the previous year, but the tendency to overcrowding is still much more marked than in 1910 and 1911. The Health Visitors in their visits to these households endeavour as much as possible to discourage overcrowding and report for the information of the Sanitary Inspectors any such as require to be dealt with through the medium of the Public Health Act.

In addition to this it is their duty to encourage the natural feeding of the children, where possible ; to discourage the practice of having the infant sleep in the same bed with the parents because of the danger of overlying, and, where artificial feeding seems necessary, to instruct the mothers how this should be done with as little risk as possible, *e.g.*, the boiling of milk and the keeping of it covered in a cool place, the use of the more cleanly boat-shaped bottle in preference to the somewhat less troublesome, but more dangerous, long tubed feeder, etc.

In addition to this home visitation, there are, as I stated in my previous report, two centres in the town, one in Scarletwell Street, and one in Market Street, known as the "Mothers' and Babies' Welcome," to which the mothers are invited along with their infants once a week. Here the Health Visitors, assisted by a number of voluntary lady helpers, meet the mothers and interest themselves in the welfare of the children. The infants are regularly weighed here, and the weight recorded on a chart which is kept by the mother, on which she can see graphically depicted the improvement which her child is maintaining, or if the case is otherwise, when it begins to lose ground. The effect of any errors in rearing the child is thus at once demonstrated, and inquiries instituted. Medical assistance is at once advised, and if necessary, help is given to bring the child back to the normal condition again. It is very pleasing to note the great interest which most of the mothers take in those charts. Occasionally talks on mother-craft are arranged for, and once a year mothers who have attended with reasonable regularity are entertained through the efforts of the ladies, to tea, etc. In the beginning of 1914, such an entertainment was held at the Corn Exchange, and close on 400 mothers attended with their infants, nearly all of whom had been attendants at those welcomes more or less regularly during some part of the preceding year. Although the work thus attempted is by no means on such an ambitious scale as is the case in many other towns, there is no lack of evidence that good work is being done, and I am convinced that part at least of the fall in the infant mortality may be placed to the credit of such efforts. The average daily attendance of mothers and babies at the Scarletwell Street Centre during the year was 76, the largest number on any one day being 91. At the similar Centre in Market Street, the average attendance was 41, and the greatest in any one day, 65. These figures compare favourably with those of previous years.

During the year, a beginning was made with a small class of instruction for expectant mothers. Reference has already been made

to these under the portion of the report dealing with Infant Mortality, and it was there stated that most of the deaths of infants which occurred during the first month of life were due to ante-natal conditions, and, as the death-rate during this period contributes enormously to the Infant Mortality, it is obviously highly important to expand our efforts in this direction. The idea of such efforts is to prepare the mother for her confinement, to teach her how to keep her own health in the best possible state so that she may get through the period of child birth with less risk to her infant, which may thus be born in a state as fit as possible to survive. It is a more difficult task to reach such women as we have no notification as is the case after the birth. The midwives of the town have been asked to assist in encouraging such expectant mothers to attend the meetings. They have usually the necessary knowledge beforehand, when they are engaged to attend the mother at the birth. The average attendance since these meetings were begun in April has been 9, and the highest on any one day, 28. Opportunities are afforded the mothers of obtaining at cost price material for making baby clothes, they are helped to cut those clothes, and a sewing machine has been kindly lent to assist in the making. A cheap form of cot for the infant made from an ordinary orange box is demonstrated, and talks are given concerning the health during pregnancy, and the management of the home. A number of the ladies of Northampton have voluntarily given their services in such efforts, and although we have hitherto been contented with a small beginning, a further enlargement of our efforts is anticipated soon. I must again acknowledge the assistance in this work which is afforded by an independent effort on the part of the Superintendent and Staff of the Queen Victoria Nurses' Home.

DEATHS FROM CANCER AND OTHER MALIGNANT DISEASES.

These diseases were responsible for 94 of the deaths registered during the year. This, though a slight reduction on the number in the previous year, shows the continuation of the tendency to increase. The death-rate was 1.035 per 1,000 of the population, as Table 14 shows :—

TABLE 14. NORTHAMPTON, 1902—1913.
CANCER DEATHS AND DEATH-RATES.

Year	1902	1903	1904	1905	1906	1907	1908	1909	1910	1911	1912	1913
No. of Deaths	76	86	67	83	80	72	93	98	94	89	97	94
Death-rate ...	0.87	0.98	0.76	0.94	0.90	0.81	1.04	1.09	1.05	0.99	1.07	1.03

The following Tables show the age and sex distribution of these deaths, and the part of the body specially affected in the individual. In males, the greatest number of deaths is found from cancer of the stomach, liver, etc., and in females from the sexual organs.

TABLE 15.—NORTHAMPTON, 1913.

CANCER DEATHS. AGE AND SEX INCIDENCE.

YEARS.	Under 45	45 to 55	55 to 65	65 to 75	75 to 85	over 85	Total
Males	2	13	12	16	5	—	48
Females	3	15	7	15	4	2	46
Total	5	28	19	31	9	2	94

TABLE 16.—NORTHAMPTON, 1913.

CANCER DEATHS. ANALYSIS IN ACCORDANCE WITH THE PART OF THE BODY
PRINCIPALLY AFFECTED.

	Males.	Females.	Total.
Buccal Cavity	1	1	2
Stomach, Liver, etc.	20	12	32
Peritoneum, Intestines, and Rectum	11	6	17
Female Genital Organs	—	18	18
Breast	1	5	6
Skin	3	1	4
Other or Unspecified	12	3	15
Total	48	46	94

As yet we seem to have made little progress in reducing the mortality from these causes, although few subjects in medicine and surgery have in recent years received more attention. This seems to be largely due to our inability to successfully determine the ætiology of the disease. There seems to be no doubt that the intelligent use of radium has a very marked effect on the course of many cases of this disease. Unfortunately, this substance is so very rare at present, that its cost is almost prohibitive, but, in view of the grave nature of the disease and its apparent increase in the community, every effort should be made to obtain the use of this valuable means of alleviation, at the public cost, if necessary. It is only in this way that such advantages may be obtained by the poor.

TABLE 17. NORTHAMPTON, 1913.

CANCER DEATHS. MALE AND FEMALE IN EACH OF THE MUNICIPAL WARDS.

	Abington	Castle	Delapre	Kingsley	Kingsthorpe	North	St. Crispin's	St. Edmund's	St. James'	St. Lawrence	St. Michael's	South	Borough
Males ...	2	1	5	2	5	3	5	3	8	6	4	4	48
Females	1	7	2	4	5	2	2	5	7	1	9	1	46
Total ..	3	8	7	6	10	5	7	8	15	7	13	5	94

TUBERCULOSIS. In 1913, 126 deaths were registered as due to this disease, 67 of these were of males, and 59 of females. In 1911 and 1912, there were 141 and 144 deaths respectively. The death-rate for 1913, was 1.39 per 1,000.

TUBERCULOSIS OF THE LUNG. As this is the commonest manifestation of the disease the cases exhibiting it are classified separately, although this disease is not a local one but a general one as a rule. 100 deaths are placed in this category in 1913, 55 of males, and 45 of females. In 1912 the number

of deaths was 119. The death-rate from this form of tuberculosis in 1913 was 1.1; a lower figure than that of the previous year, which was 1.32.

TUBERCULOSIS, OTHER THAN PULMONARY. The deaths registered of cases in which the prominent manifestations of the disease were not in the lung, although the lung may have been affected, numbered 26. 12 of these were of males, and 14 of females. The death-rate was 0.29, while in 1912, it was 0.28.

TABLE 18.—NORTHAMPTON, 1876-1913.

DEATH-RATES FROM PULMONARY AND OTHER FORMS OF TUBERCULOSIS IN 1911-12-13, AND IN EACH OF THE SEVEN PRECEDING QUINQUENNIA.

Quinquennial Periods.	Pulmonary Tuberculosis.	Other forms of Tuberculosis.
1876—1880	1.93	0.51
1881—1885	1.81	0.20
1886—1890	1.60	0.39
1891—1895	1.56	0.30
1896—1900	1.45	0.30
1901—1905	1.25	0.37
1906—1910	1.19	0.31
1911	1.23	0.33
1912	1.32	0.28
1913	1.10	0.29

It will be seen from the foregoing table that the death-rate has been declining in a fairly steady manner since 1876, although recently there has been evidence that this decline has ceased to progress. Table 19 shows the distribution of the deaths from Tuberculosis throughout the various wards in the Town. Unfortunately, owing to the change in the wards, it is not possible to compare this Table with the figures for the previous years.

TABLE 19. NORTHAMPTON, 1913.

TUBERCULOSIS. DEATHS IN EACH WARD FROM PULMONARY AND OTHER FORMS OF THE DISEASE.

	PULMONARY.			OTHER FORMS.			TOTAL.		
	M.	F.	Total	M.	F.	Total	M.	F.	Total
Abington	3	1	4	...	...	..	3	1	4
Castle	8	3	11	2	2	4	10	5	15
Delapre .....	...	2	2	...	2	2	...	4	4
Kingsley	3	3	6	1	...	1	4	3	7
Kingsthorpe	2	3	5	1	1	2	3	4	7
North	7	8	15	1	1	2	8	9	17
St. Crispin's	7	6	13	...	2	2	7	8	15
St. Edmund's	3	5	8	...	1	1	3	6	9
St. James'	7	8	15	2	...	2	9	8	17
St. Lawrence's	6	1	7	1	1	2	7	2	9
St. Michael's	4	3	7	4	3	7	8	6	14
South	5	2	7	...	1	1	5	3	8
Total	55	45	100	12	14	26	67	59	126

The relationship between occupation and tuberculosis mortality will be seen from the next Table, which is drawn out on the same lines as the corresponding Table in previous reports.

TABLE 20. NORTHAMPTON, 1913.

PULMONARY TUBERCULOSIS. OCCUPATIONAL MORTALITY IN AGE PERIODS.

OCCUPATION. MALES.	YEARS OF AGE.									TOTAL ALL AGES
	un- der 10	10 to 15	15 to 20	20 to 25	25 to 35	35 to 45	45 to 55	55 to 65	65 to 75	
	10	15	20	25	35	45	55	65	75	
Shoe-Operatives (total)	3	12	6	3	1	1	...	26
(a) Clickers	1	6	2	...	...	...	...	9
(b) Lasters	1	1	1	...	1	1	...	5
(c) Finishers.....	1	2	2	3	...	...	...	8
(d) Pressmen and Rough Stuff Workers
(e) General and Ware- house men	3	1	...	...	...	...	4
Butcher	1	...	...	...	...	1
Canvasser	1	...	1
Carriage Builder	1	...	...	...	1
Chauffeur	1	...	...	...	...	1
Clerk	1	1	...	...	...	...	2
Drover	1	...	...	1
Engine Driver	1	...	...	1
Florist	1	...	...	...	...	...	1
Gardener.....	1	...	...	...	...	...	1
Insurance Agent	1	...	...	...	...	1
Labourer.....	2	2	...	1	...	5
Porter	1	...	...	...	...	...	1
Printer	1	...	...	...	...	...	1
Shop-Assistant	2	...	...	...	...	...	...	2
Stone-Mason	1	...	...	1
Street Sweeper	1	...	1	...	2
Tanner	1	...	...	1	...	...	2
Tram Driver	1	...	...	...	...	1
Wood Turner	1	...	1
No Occupation	2	...	...	...	...	...	...	...	...	2
Total	2	...	5	18	13	7	5	5	...	55

OCCUPATION. (FEMALES).	YEARS OF AGE.									TOTAL ALL AGES.
	un- der 10	10 to 15	15 to 20	20 to 25	25 to 35	35 to 45	45 to 55	55 to 65	65 to 75	
Shoe Operatives .....	...	...	3	6	3	...	...	...	...	12
Blouse or Pinafore Maker .....	...	...	1	1	...	...	...	...	...	2
Bookbinder .....	...	...	1	...	...	...	...	...	...	1
Box Maker.....	...	...	...	1	...	...	...	...	...	1
Charwoman .....	...	...	...	...	...	1	...	...	...	1
Dressmaker .....	...	...	1	...	...	...	...	...	...	1
Laundress .....	...	...	...	...	...	1	...	...	...	1
Music Teacher .....	...	...	...	...	1	...	...	...	...	1
Shop Assistant .....	...	...	...	...	1	...	...	...	...	1
Store Keeper .....	...	...	...	1	...	...	...	...	...	1
Waitress .....	...	...	...	...	...	1	...	...	...	1
Houseworker .....	...	...	...	...	5	3	6	...	1	15
School Child	2	1	...	...	...	...	...	...	...	3
No Occupation .....	...	...	...	...	2	2	...	...	...	4
Total	2	1	6	9	12	8	6	...	1	45
Shoe Operatives :—										
Males .....	...	...	3	12	6	3	1	1	...	26
Females .....	...	...	3	6	3	...	...	...	...	12
Total .....	...	...	6	18	9	3	1	1	...	38
All Occupations (ex- clusive of House- workers and school- children) :—										
Males .....	...	...	5	18	13	7	5	5	...	53
Females .....	...	...	6	9	5	3	...	...	...	23
Total .....	...	...	11	27	18	10	5	5	..	76
Total Deaths :—										
Males	2	...	5	18	13	7	5	5	...	55
Females	2	1	6	9	12	8	6	...	1	45
Total	4	1	11	27	25	15	11	5	1	100

Again, as in the previous year, the term "Lasters" includes rivetters, tackers, blockers, sole sewers and sewers; the term "Finishers" includes heel builders, heel parers, heel attachers, heelers, and edge setters; and amongst "General and Warehousemen" are included cordwainers, repairers, fitters, and closers (male), boot makers, boot workers, examiners, pattern cutters, and closers (male). The female operatives are included in one group. The above classification, however, has only been fully adopted during 1912 and 1913, and accurate comparison of the figures of these and former years is not at present available.

TABLE 21. NORTHAMPTON, 1913.
CLASSIFICATION OF TUBERCULOSIS DEATHS ACCORDING TO THE PART OF THE
BODY STATED TO BE MOST AFFECTED.

	M.	F.	TOTAL
Meninges	7	7	14
Peritoneum and Intestines	4	2	6
Other Organs .....	...	3	3
Disseminated	1	2	3
Total	12	14	26
Lungs	55	45	100
Total	67	59	126

TABLE 22. NORTHAMPTON, 1913.
TUBERCULOSIS DEATHS. SHOWING THE YEAR IN WHICH THE CASE WAS
FIRST NOTIFIED TO THE MEDICAL OFFICER OF HEALTH.

YEAR OF NOTIFICATION.	M.	F.	TOTAL.
1906 .....	..	1	1
1907 .....	...	...	...
1908	4	1	5
1909	4	3	7
1910	2	...	2
1911	5	5	10
1912	18	19	37
1913	22	16	38*
Total	55	45	100

* 38 deaths before the close of the year amongst 230 cases notified in 1913, indicates a fatality of 16.5 per cent.

For a dozen years up to the beginning of 1912, notification of pulmonary tuberculosis was more or less voluntary in Northampton, although during the latter part of this period as pointed out in my previous report, a certain amount of compulsory notification was also in force. Since 1908, notification was compulsory in regard to Poor Law cases, and in 1911, this was extended to cases met with in Hospital practice. In the beginning of 1912, however, compulsory notification of tuberculosis of the lung became universal in consequence of the issue under an Order of the Local Government Board on November 15th, 1911, with the Public Health (Tuberculosis) Regulations. Two months earlier than the coming into force of this Order, however, this disease became compulsorily notifiable in consequence of the operation of the Northampton Corporation Act, 1911, and as an Act of Parliament appears in all cases to supersede the Order of a Government Department, the cases in the town are notified under this Act in preference to the Regulations. This, of course, makes very little practical difference. In February, 1913, a further Order of the Local Government Board came into force. This is termed the Public Health (Tuberculosis) Regulations, 1912. This Order makes it compulsory that cases of tuberculosis in any of its forms (not only pulmonary) must be notified to the Medical Officer of Health of the district by medical practitioners and medical officers of various institutions as well as by school medical officers. This Order, however, cannot supersede the terms of our Local Act of Parliament in reference to pulmonary tuberculosis, and the consequence is that it is necessary to notify these latter under the Local Act, and all other forms of tuberculosis under the Regulations. This has given rise to some slight complication, but there has been no serious difficulty in practice.

During 1913 there were 230 notifications of separate cases of pulmonary tuberculosis not previously notified. This number includes cases notified as Tuberculous Laryngitis (7) and Tuberculous Pleurisy (2). Since February, when the last Order of the Local Government Board, referred to above, came into force, 74 cases of Tuberculosis other than Pulmonary have been notified. The total number of Tuberculosis cases notified, therefore, was 304. This is exclusive of 18 cases notified in the town but belonging to other districts, which are known as outward transferable cases and are properly debited to the districts from which they came.

The next Table gives a classification of these cases according to the part of the body specially affected.

TABLE 23. NORTHAMPTON, 1913.
TUBERCULOSIS. CLASSIFICATION OF NOTIFIED CASES.

	M.	F.	TOTAL
Pulmonary—			
Lung and Pleura	125	98	223
Larynx	7	...	7
	132	98	230
Meninges and Brain	4	3	7
Peritoneum and Intestines	2	3	5
Spinal Column	6	5	11
Joints	10	14	24
Cervical Glands	8	9	17
Other Organs	4	5	9
Unclassified .....	...	1	1
Total	166	138	304

In addition to the above notified cases, the deaths of 15 were registered in which no previous notification had been received. Four of these were outward transferable deaths, and are not counted to Northampton, and of the remainder the classification is as follows :—

	M.	F.	TOTAL.
Pulmonary	2	...	2
Meninges	3	3	6
Peritoneum	1	...	1
Unclassified .....	...	2	2
Total	6	5	11

The Tables which follow, as in previous years, refer almost entirely to cases of pulmonary tuberculosis.

TABLE 24. NORTHAMPTON 1901—1913.

PULMONARY TUBERCULOSIS. COMPARISON BETWEEN NUMBERS OF CASES NOTIFIED AND DEATHS REGISTERED EACH YEAR.

Year.	Cases notified.	Deaths registered	Death-rate.
1901	44	104	1.19
1902	34	126	1.44
1903	55	114	1.29
1904	71	104	1.18
1905	67	99	1.01
1906	125	80	0.90
1907	99	116	1.30
1908	117	104	1.16
1909	130	118	1.32
1910	124	112	1.25
1911	155	111	1.23
1912	216	119	1.32
1913	230	100	1.10
Total	1467	1407	—
Annual Average	117	108	1.21

TABLE 25. NORTHAMPTON, 1913.

PULMONARY TUBERCULOSIS. NOTIFICATIONS AND DEATHS OF CASES NOT NOTIFIED.

	Male	Female.	Total.
Number of Cases Notified	134	96	230
Number of Deaths of Cases not Notified ...	2	...	2*
Total	136	96	232

*After deducting the outward transferable deaths.

As is usual, the circumstances in connection with most of the above cases formed the subject of investigation, but for certain reasons this was omitted in six male and ten female cases, making the number investigated 216.

The following Tables, compiled from the information obtained as a result of these investigations, are on the same lines as in former years.

TABLE 26. NORTHAMPTON, 1913.

PULMONARY TUBERCULOSIS. NOTIFIED CASES AND DEATHS OF CASES NOT NOTIFIED WHICH FORMED THE SUBJECT OF INVESTIGATION. DURATION OF ILLNESS.

PERIOD.	Cases Notified.	Deaths Registered of Cases not previously notified.	Total.
Under 6 months	55	1	56
Over 6 months and under 1 year	70	...	70
Over 1 year and under 2 years ...	50	1	51
Over 2 years and under 3 years ...	13	...	13
Over 3 years and under 4 years ...	9	...	9
Over 4 years and under 5 years ...	2	...	2
Over 5 years	9	...	9
Not Ascertained	6	...	6
Total	214	2	216

TABLE 27. NORTHAMPTON, 1913.

PULMONARY TUBERCULOSIS INVESTIGATIONS.

	MALES.	FEMALES.	TOTAL.
Single	60	69	129
Married	62	18	80
Widows and Widowers	6	1	7
Total	128	88	216

TABLE 28. NORTHAMPTON, 1913.
PULMONARY TUBERCULOSIS INVESTIGATIONS. DEGREE OF
HOME ISOLATION FOUND.

	MALES.	FEMALES.	TOTAL
Number having separate Bedrooms	59	35	94
Number having separate Beds (only)	14	15	29
Number having no Isolation ...	48	35	83
Number in Institutions	7	3	10
Total	128	88	216

TABLE 29. NORTHAMPTON, 1913.
PULMONARY TUBERCULOSIS. INVESTIGATIONS. OCCUPATIONAL INCIDENCE.

OCCUPATION.	NO.	OCCUPATION.	NO.	OCCUPATION.	NO.
Shoe-Operatives—		Commercial		Road Sweepers ..	2
Clickers	16	Travellers	2	Royal Marine	1
Lasters	6	Draymen	2	School Children ...	20
Finishers	24	Engine-driver	1	Shop Assistants ...	7
Rough Stuff		Footman	1	Stone Mason	1
and Pressmen	6	Foundryman	1	Tanners.....	2
Warehousemen		Furrier	1	Tram Driver	1
and General...	9	Grooms	2	Upholsterer	1
Female Workers	30	Hairdresser	1	Waitresses	2
Actress	1	Harness-maker ...	1	Warehouse-woman	1
Baker	1	Houseworkers	18	Watchmaker	1
Blousemakers.....	7	Insurance Agent	1	Weight and Scale	
Boxmakers	2	Labourers	5	Maker	1
Butcher	1	Laundresses	4	Wood Turner	1
Canvasser	1	Milliner	1	No Occupation ...	7
Carpenter	1	Music Teacher	1	Not Ascertained	1
Currier	1	Painters.....	2		
Chauffeur	1	Policeman ...	1	Total	216
Clerks	9	Porters	3		
Club Manager ...	1	Railwaymen	2		

Reference to the last Table above will show that 42 per cent. of all these cases were amongst shoe operatives ; 48.4 per cent. of those who were occupied (including House-workers) were shoe operatives, and if the group of housewives is excluded this percentage is raised to 53.5.

TABLE 30.
TUBERCULOSIS AND SANATORIUM TREATMENT.

149 (115 on behalf of Insurance Committee) of the 216 investigated cases notified in Sanatorium Treatment, along with 55 cases notified previous											
160 on behalf of the Northampton Insurance Committee, 12 of whom made no application for "Sanatorium Benefit" though advised to do so.											
2 were found not to be cases of Tuberculosis	91 were found not to be suitable for Sanatorium Treatment as the disease was too far advanced.			67 were considered in a sufficiently early stage to warrant being sent to a Santatorium.							
				13 were not sent for the following reasons.				1 was sent but did not remain	47 were admitted to Sanatoria.		
	1 left the Town	6 were admitted to Kings-thorpe Isolation Hos-pital	84 were grant-ed Domi-ciliary Treat-ment in many cases com-bined with Tuber-culin Injec-tions at the Public Health Office	1 was found later to be more suit-able for Home Treat-ment along with Tuber-culin Injec-tions at the Public Health Office.	1 Dis-sease was ar-rested with-out going to San-ator-ium	1 Pre-ferred to go to Vent nor on his own ac-count	10 Re-fused to go or failed to make proper ap-plica-tion though urged to do so		2 to Vent-nor	5 to Zet-land	40 to Crea-ton
											6 were recom-mend-ed and were wait-ing a va-cancy at the end of the year

NORTHAMPTON, 1913.

CASES DEALT WITH DURING THE YEAR.

1913 were examined by the M.O.H. (or Tuberculosis Officer) with a view to possible to 1913 (45 for the Insurance Committee)—a total of 204.

44 on behalf of the Northampton Town Council (non-insured persons).

2 were found not to be cases of Tuber- culosis	27 were found not suitable for Sana- torium Treatment as Disease was in too advanced a stage		15 were considered in a sufficiently early stage to warrant Sanatorium Treatment.				
			2	5	8		
			Could not be sent because of other complica- tions which rendered this treatment undesir- able	Refused to take advantage of the offer to be sent to a Sana- torium	were admitted to a Sanatorium		
	4	23			6	1	1
	Admitted to Kings- thorpe Isolation Hospital	Were treated at home under the super- vision of M.O.H. or Tuber- culosis Officer			to Creaton	to North- wood	to St. Kath- erine's Home at Ramsgate

SANATORIUM TREATMENT. A description of the Northamptonshire Sanatorium at Creaton has been given in former reports, as well as the procedure adopted previous to admission of a case from the town, and it is unnecessary to repeat such here. The coming into force of the National Insurance Act, 1911, made some little difference in our procedure in connection with insured persons, who are now sent on behalf of the Insurance Committee on the advice of its Medical Adviser (The Medical Officer of Health up till the beginning of August and the Tuberculosis Officer after that date).

The next Table (30) gives the results of dealing with the tuberculosis cases (insured and non-insured persons) in regard to sanatorium treatment.

As the Tuberculosis Officer did not take up his duties till August it was found impossible to examine all the cases notified. All insured persons must apply through the Insurance Committee before being eligible for Tuberculosis Benefit, and as all such did not apply during the year some of these were not examined. Table 30 shows the numbers which were actually examined. Owing to the lack of accommodation for the increased numbers dealt with the Sanatorium at Creaton could not take all the cases, and a few were sent to other sanatoria at Ventnor, Northwood, Ramsgate, and Zetland (on the Norfolk Coast). All institutions to which insured persons were sent had of course to be approved by the Local Government Board.

The following is a summary of the Northampton cases dealt with in Sanatoria during 1913:—

	M.	F.	TOTAL.
Remaining under treatment at end of 1912 ...	6	5	11
Admitted during 1913	35	20	55
Discharged during 1913	21	17	38
Remaining at end of 1913	20	8	28

Of the 55 cases admitted, 6 had previously received this treatment; five of these were amongst the 38 discharged, and one remained under treatment at the end of the year.

In reference to each patient, on discharge a report is sent from the Sanatorium Authorities, giving certain details of the patient's condition at the time of his leaving, and from a summary of these reports the following Table is made out.

TABLE 31. NORTHAMPTON, 1913.

PULMONARY TUBERCULOSIS. IMMEDIATE RESULTS OF SANATORIUM TREATMENT AMONGST CASES WHICH LEFT THE SANATORIUM DURING THE YEAR.

	NUMBER.	PER CENT
Disease reported to be:—		
Arrested	24	63.2
Much Improved	4	10.5
Improved	8	21.0
Not Improved	2	5.3
Total	38	100.0

Some of the above patients did not remain under treatment long enough in the opinion of the medical officers to obtain the best results, leaving of their own accord, mostly because of domestic troubles at home.

I have in former years been able to give the more remote results of sanatorium treatment, as I have been able to keep in close touch with nearly all our cases since 1906, who still remained alive. The largely increased number of patients who have been dealt with during 1913, however, and the work entailed, has not permitted me to retain this association sufficiently to be able to reproduce this Table, and as a partial report would probably be misleading I have decided to omit it.

THE BOROUGH HOSPITAL FOR CONSUMPTIVES. This institution and its functions have been fully described in former reports. It consists

of a completely isolated ward block forming part of the Borough Hospital at Harborough Road, and is set aside for the isolation of advanced cases of pulmonary tuberculosis when the disease is believed to be in its most communicable stage. Such cases have been isolated at the expense of the community since 1906, at first in the Welford Road Hospital, but since October, 1907, in the Harborough Road Institution. Ten or eleven beds are thus set apart for this use, and early in 1913, the institution received the approval of the Local Government Board to take cases of insured persons applying, and eligible, for tuberculosis benefit, if in the later stages of the disease. An arrangement with the local Insurance Committee enabled this to be done at a charge on the Sanatorium Benefit Fund of a guinea per week each. At the same time non-insured persons were received as before at the public cost.

Table 32 indicates the number of cases dealt with during 1913, and in considering the Table it must be remembered that many of the cases spend prolonged periods isolated in this way, as there is no hope of cure.

TABLE 32. NORTHAMPTON, 1913.

TUBERCULOSIS. CASES ISOLATED AT THE BOROUGH HOSPITAL
DURING THE YEAR.

			M.	F.	TOTAL
Number remaining at end of 1912	...	...	6	7	13
Number admitted during 1913	...	...	14	3	17
Number discharged during 1913	...	...	10	4	14
Number died during 1913	...	...	4	2	6
Number remaining at end of 1913	...	...	6	4	10

Of the cases admitted, six were those of insured persons or dependents.

In the beginning of the year I submitted to the Public Health Committee and, after its approval, to the Council a "Report of a General Scheme for the Prevention, Control, and Treatment of Tuberculosis in the County Borough of Northampton." This was drawn up on the lines suggested in the Interim report of the Departmental Committee on Tuberculosis, and corresponds generally with the scheme which I had already put before the Council in my annual report for 1911, and had even outlined in my report for the previous year. This report on the above-mentioned general scheme was separately printed and distributed, and received the general approval, subject to the adjustment of details, of the Council, the Local Insurance Committee, the Commissioners and the Local Government Board. During the year preparations were made for putting it into operation, with the sanction of the Local Government Board. The Medical Officer of Health was appointed Chief Tuberculosis Officer mainly for administrative purposes, and Dr. Parsons, hitherto Deputy-Medical Officer of Health and School Medical Officer, was made Clinical Tuberculosis Officer. Premises were obtained for a Tuberculosis Dispensary, and a commencement made with their adaptation and equipment ready for opening in the early part of 1914. The Welford Road Hospital was sanctioned by the Local Government Board as an institution for the isolation of the later stage cases, the education of domiciliary cases, and the observation of cases prior to classification, and a commencement was made for its enlargement and adaptation. Also negotiations were begun with the County Council and the Creton Sanatorium Committee for the removal, enlargement, and joint ownership and management of that institution for the treatment of early cases of the disease. Unfortunately at first agreement on certain points seemed impossible between the three bodies, and the completion of this last part of the scheme has been considerably delayed, though in the beginning of 1914, even this showed signs of progressing. As to my mind the Sanatorium part of the General Scheme is perhaps the least, and certainly not the most important, we may to some extent congratulate ourselves on results so far.

As soon as Dr. Parsons entered on his duties in August a beginning was made to carry on a temporary dispensary at the Public Health offices, and this was continued until the new dispensary premises were ready in the present year (1914).

Tuberculin treatment was given when indicated, patients were examined and classified for treatment, and consultations were afforded in the case of patients receiving domiciliary treatment. At the same time, Dr. Parsons as Clinical Tuberculosis Officer succeeded the Medical Officer of Health as Adviser to the Local Insurance Committee. The year 1913, therefore, in regard to anti-tuberculosis measures has been a particularly busy one as showing a gradual transition from the old conditions to the new.

I may conveniently mention here the Tuberculosis Order of 1913, made by the Board of Agriculture and Fisheries in exercise of powers vested in them under the Contagious Disease of Animals Acts, 1894 to 1911. This Order, which came into force on the 1st of May, 1913, recognises the fact that tuberculosis is transmissible to man from affected bovine animals by the agency of milk used for human consumption. The Order aims at securing the destruction of every cow found to be suffering from tuberculosis of the udder, or to be giving tuberculous milk, as well as all such animals found to be affected with tuberculosis with emaciation. Briefly, the Order requires the Local Authority, for the purposes of the Diseases of Animals Acts, to take certain steps to discover with the aid of a Veterinary Surgeon the existence of animals suffering from tuberculosis such as above, or giving tuberculous milk, with a view to causing their slaughter. Compensation on certain fixed lines and under certain conditions must be made to the owner of the slaughtered animal, and the expenses of this are shared by the Local and the Central Authorities. The duty of carrying out the Order devolves on the Markets Committee of the Council and its Veterinary Inspector. As, however, the inspection of cowsheds, and the taking of milk samples under the Sale of Food and Drugs Acts are among the ordinary duties of Inspectors of Nuisances, the Public Health Committee were asked to co-operate with the Markets Committee by obtaining samples of milk for examination for Tubercle Bacilli, and if such tuberculous milk were discovered to bring it to the notice of the veterinary officer charged with carrying out the Order.

Accordingly twelve samples of milk, each of the mixed milk of a separate herd, were taken in the Borough, and the next Table (36) gives a tabular statement of the result of the bacteriological examination of such. The agency employed in such examinations is the Lister Institute of Preventive Medicine, London

TABLE 33 NORTHAMPTON, 1913.

DISEASES OF ANIMALS ACTS, 1894-1911. TUBERCULOSIS ORDER, 1913.

BACTERIOLOGICAL REPORT ON SAMPLES OF MILK SUBMITTED.

Identification Number.	Result of Examinations.
1	Free from Disease.
2	„ „
3	„ „
4	„ „
5	„ „
6	„ „
7	„ „
8	„ „
9	„ „
10	„ „
11	Macro- and Micro-scopical traces of Tuberculosis.
12	Free from Disease.

There was thus found one herd out of the dozen in which some animal or animals were giving tuberculous milk, and on this being reported to the Veterinary Inspector it was his duty to examine the herd in order to discover if any animal were suffering from tuberculosis. The date on which the sample was taken was December 9th, 1913, and the report was not received till January 7th, 1914. This delay seems inevitable, owing to the process to be gone through in examination. Guinea pigs have to be inoculated with the milk, and time must elapse before these show signs of the disease and a P.M. examination has then to be carried out on their tissues before any reliable report can be given. The result of all this delay is that when the herd comes to be examined by the Veterinary Surgeon it may not consist of exactly the same animals as it did when the sample was taken. In this case the Veterinary Surgeon reported that there were no clinical evidences of tuberculosis to be found in any animal, though the herd was said not to have been changed in the interval. Another sample was submitted from the same herd, but this did not take place during the period covered by this report.

SPECIFIC FEBRILE OR ZYMOTIC DISEASES. The deaths from this group of diseases numbered 121, 38 more than the number registered in 1912. The increase is chiefly due to the greater number of deaths from diarrhoeal diseases, diphtheria, and scarlatina, though there was a definite decrease in the number of deaths from measles and whooping cough. The zymotic death-rate was 1.33, compared with 0.92 in 1912, and 1.46 in 1911.

TABLE 34. NORTHAMPTON, 1903—1913.

ZYMOTIC DEATHS AND DEATH-RATES.

	1903	1904	1905	1906	1907	1908	1909	1910	1911	1912	Average of 1903-1912 (10 years)	1913
Deaths	120	139	94	84	88	73	83	86	132	83	98	121
Death-rates .	1.4	1.6	1.1	0.9	1.0	0.8	0.9	1.0	1.5	0.9	1.1	1.3

TABLE 35. NORTHAMPTON, 1913.

ZYMOTIC DISEASES. DEATHS IN MUNICIPAL WARDS.

WARD.	Measles	Scarlatina.	Whooping Cough	Diphtheria.	Typhoid Fever.	Diarrhoea. Under 2 years.	Total.
Abington .....	...	1	...	1	...	1	3
Castle	11	...	...	4	4	12	31
Delapre .....	...	...	...	1	...	2	3
Kingsley ..	3	1	...	1	...	3	8
Kingsthorpe	2	...	...	...	...	3	5
North	8	...	...	3	...	5	16
St. Crispin's	2	...	...	3	...	...	5
St. Edmund's	1	...	3	5	...	1	10
St. James' .....	...	...	1	3	...	4	8
St. Lawrence's	5	2	...	3	...	3	13
St. Michael's	4	...	...	3	...	1	8
South	1	2	1	...	...	7	11
Borough	37	6	5	27	4	42	121

SMALL-POX. No case of this disease was notified, and of course there were no deaths.

VACCINATION. I have again to thank Mr. Paget, Medical Officer of Health for the County, for figures from which I can approximately estimate the vaccinal condition of the community. Although Mr. Paget's figures apply to the Northampton Union, this area corresponds approximately though it is not quite the same, with the County Borough, both in population and extent.

TABLE 36.—NORTHAMPTON UNION, 1900–1912.

VACCINIA. TABLE SHOWING THE NUMBER OF CHILDREN, PER CENT, WHO HAVE NOT BEEN VACCINATED, AFTER DEDUCTING THE NUMBER DEAD BEFORE VACCINATION TOOK PLACE.

1900	1901	1902	1903	1904	1905	1906	1907	1908	1909	1910	1911	1912
76.2	66.6	58.7	62.9	76.2	66.8	67.1	76.8	78.3	80.5	81.8	82.3	84.7

The latest statistics available are those for 1912. During this year there were 1,958 children born in the area, and in connection with these 1,492 certificates were granted of so-called conscientious objection. 96 children died before being vaccinated, and 86 cases have apparently been lost sight of or at least are not accounted for. It seems to me of little avail to urge the benefits of vaccination and re-vaccination in a community which shows such an attitude. Fortunately, we have at Hardingstone, a small-pox hospital ready at a few hours warning to isolate the first few cases of this disease when it breaks out. The staff of the department at least is protected by this measure, in readiness for dealing as promptly as possible with any outbreak should it arise.

MEASLES. I dealt with this disease at some length in my report for 1912. The outbreak which I had anticipated would occur during that year spread all over the town in the later months, and although the infants' depart-

ments of all the schools were closed for several weeks, at the end of the year, the outbreak was not suppressed until the end of the first quarter of 1913. In the year under consideration at present, this disease, therefore, was both extremely prevalent and distinctly fatal during the first quarter. Since then, both the number of cases and the number of deaths have markedly declined. 37 deaths occurred during the year, all except one being in the first three months. 33 of these occurred under the age of 5 years (89.2 per cent.), and all were under 6 years of age. The Northampton death-rate from measles was, therefore, 0.41 per 1,000, compared with 0.49 in the previous year.

In England and Wales it was 0.28 ; in the great towns 0.34 ; in the smaller towns 0.30 ; in the rest of the Country 0.20 ; and in London 0.34. Northampton's figure, as was the case last year, was greater than any of these.

TABLE 37. NORTHAMPTON, 1898—1913.

MEASLES. TABLE SHOWING THE DEATHS AND DEATH RATES FROM MEASLES SINCE THE COMMENCEMENT OF SCHOOL NOTIFICATION.

Year.	Number of cases notified from the Public Elementary Schools.	Deaths.	Death-rate
1898	542	33	0.54
1899	205	1	0.02
1900	637	21	0.34
*1901	314	5	0.06
1902	1157	43	0.41
1903	482	10	0.11
1904	22	1	0.01
1905	2184	15	0.17
1906	5	...	...
1907	1395	29	0.32
1908	16	3	0.03
1909	1797	29	0.32
1910	938	19	0.21
1911	42	...	...
1912	1316	44	0.49
1913	1314	37	0.41

* Borough was extended in this year.

TABLE 38. NORTHAMPTON, 1913.

MEASLES AND WHOOPING COUGH. MONTHLY INCIDENCE AND MORTALITY
DURING THE YEAR.

MONTHS.	MEASLES.		WHOOPING COUGH.	
	CASES REPORTED	DEATHS	CASES REPORTED	DEATHS
January	426	26	26	1
February	619	6	78	—
March	149	4	73	—
April	41	1	20	—
May	10	—	24	2
June	26	—	24	—
July	34	—	4	—
August	School Holiday.	—	School Holiday.	—
September	4	—	4	—
October	2	—	5	1
November	2	—	—	—
December	1	—	3	1
Total	1314	37	261	5

Table 38 shows the number of cases notified from the public elementary schools, with the deaths registered, and the death-rate, in each of the last sixteen years. The average death-rate for the fifteen years (1898 to 1912) previous to 1913, was 0.21 per 1,000, so that the death-rate during this latter year is nearly double the average for that preceding period. Table 41 gives the monthly notifications, and deaths, in this disease and in whooping cough.

The notifications from the schools do not indicate the full extent of the prevalence of this disease. Generally speaking each notification signifies that there are children attending the school from a household presumably infected with measles. In many instances, the school child itself is the infected case, but frequently it is some other child in the household, and a single notification often indicates the presence of several cases, some of which are children under the school age.

Although the number of deaths is not quite so many as in 1912, it is still higher than the number in any other year since 1898, with the exception of 1902.

In last year's report I commented on the fact that despite our real progress in many other directions we are still unable to prevent, or even to modify in any material respect, the prevalence of such diseases as measles and whooping cough.

Again I would point out the apparent apathy often displayed by the parents and friends in the presence of measles. The medical practitioner is frequently not called in until some dangerous complication arises, and very little care is taken to isolate the affected cases. Owing to the fact that most children are attacked at a very early age when it is difficult to isolate them from their mothers, and also to the explosive character of the outbreaks, it becomes a matter of extreme difficulty, if not impossibility, to make adequate provision for the cases in hospital. Although in some towns some such provision is made, it is really only a small percentage of the patients which can be thus treated, and I have yet to learn that dealing with the disease in this way has materially modified its prevalence, although it may have some influence on its fatality.

I do not believe that a repetition of my remarks made in this connection in last year's and previous reports, in reference to the indiscriminate admission of children under five years to our elementary schools will have any effect. For years now I have commented on this, and here I shall merely state that my opinion is unchanged. If the community would realise the large proportion of the death-rate contributed by measles and whooping cough, and the still larger proportion of subsequent diseases set up by these conditions and their complications, one might hope for some better results, but when by sending such young children to school the mother is relieved of some responsibility, and the community earns grant for their attendance, it will be difficult to bring about any alteration.

WHOOPIING COUGH. Reference to Table 38 above will show the monthly incidence and mortality from this disease, and the next Table (39) will show the death-rates, etc., during the last fourteen years. It will be seen that this disease was distinctly less prevalent during 1913 than in the preceding year. The cyclical character of the outbreaks will be apparent from the Table.

In England and Wales the death-rate was 0.14 ; in the greater towns 0.17 ; in the smaller towns 0.13 ; in London 0.17 ; and in the remainder of the Country 0.12. Northampton's figure is a good one compared with any of these.

TABLE 39. NORTHAMPTON, 1900—1913.

WHOOPIING COUGH.

DEATHS AND DEATH-RATES DURING THE LAST FOURTEEN YEARS.

Year.	Notifications from Schools.	Deaths.	Death-rates per 1,000.
1900	...	18	0.29
1901	...	37	0.42
1902	...	25	0.29
1903	...	32	0.36
1904	65	4	0.04
1905	165	24	0.27
1906	51	8	0.09
1907	269	12	0.13
1908	189	28	0.31
1909	72	...	...
1910	602	24	0.27
1911	134	7	0.08
1912	535	13	0.14
1913	261	5	0.05

SCHOOL CLOSURE. A considerable amount of school closure was advised in 1912, and although I believe this had some slight modifying effect, such was not sufficiently marked to make it advisable to repeat this measure during 1913 on a similar wholesale scale. Indeed, only one school was closed (Kettering Road Infants' Department), in the beginning of the year, the closure extending from the 27th of January to the 16th February (both dates inclusive). This Department, although closed along with the others in the end of the previous year, still showed an abnormal incidence of the disease in the beginning of 1913, and it was thought advisable to extend the period of closure as indicated. By the time the school was re-opened, the disease had run its course and was subsiding.

TABLE 40. NORTHAMPTON, 1902—1913. SCARLATINA.

Year.	Population.	Notifi- cations.	Attack Rate per 1000.	Deaths.	Death-rate.	Case Mortality per cent.	Zymotic Death-rate.	General Death-rate.	Numbers Removed to Hospital.	Removal- rates per cent.
1902	87397	161	1.84	3	0.03	1.9	1.5	14.8	118	73.2
1903	87699	662	7.55	24	0.27	3.6	1.4	13.9	398	60.1
1904	88002	2224	25.27	40	0.45	1.8	1.6	13.5	746	33.5
1905	88306	827	9.34	16	0.18	1.9	1.1	13.1	493	59.6
1906	88610	276	3.11	5	0.06	1.8	0.9	12.0	208	75.4
1907	88915	307	3.45	5	0.06	1.6	1.0	12.9	222	72.3
1908	89223	731	8.19	5	0.05	0.7	0.8	12.8	451	61.7
1909	89534	951	10.62	4	0.04	0.4	0.9	14.4	612	64.3
1910	89843	279	3.1	...	...	...	1.0	12.6	208	74.5
1911	90152	136	1.5	...	...	...	1.5	13.3	108	79.4
1912	90467	279	3.1	1	0.01	0.3	0.9	12.1	229	82.1
1913	90793	435	4.8	6	0.07	1.4	1.3	13.0	282	64.8

Figures given in this table refer to notification received without reference to corrected diagnosis.
Similar figures given in the text and in other tables refer to corrected diagnosis.

SCARLATINA. In my previous report I drew attention to the cyclical character of the outbreaks of this disease, and I mentioned that waves of increased prevalence appeared to attack communities at intervals. The history of the disease in recent years seems to show that these intervals are roughly speaking about five years apart. I mentioned that the crest of the last wave apparently occurred in 1909, and up to the year 1912, the wave seemed to be receding. In 1912, I noted a tendency for the next wave to begin its rise, and indicated the likelihood that 1913 would show an increased prevalence. Such was the case, as reference to Table 40 will show.

In 1913, there were 435 notifications, and six deaths were registered. The attack-rate, was therefore, 4.79 per 1,000, compared with 3.57 for the Country generally, 4.29 for the 78 County Boroughs, and 3.89 for London. The disease was, therefore, more prevalent in Northampton than in most other similar communities. The death-rate was 0.07, while in 1912 it was only 0.01, and in 1910 and 1911 there were no deaths.

The death-rate for England and Wales was 0.06, and for the great towns the figure was the same as for Northampton. The fatality of the disease was 1.37 per cent. of the cases notified. It is interesting to note, however, that 12 at least of the 435 notified cases proved on subsequent observation not to be scarlatina, so that there were only 423 presumably genuine cases. This reduces the real attack rate to 4.65 per 1,000, but raises the fatality to 1.42.

Table 41 shows the age and sex incidence of the disease in Northampton, and Table 42, the seasonal variation.

TABLE 41. NORTHAMPTON, 1913.

SCARLATINA. INCIDENCE OF NOTIFIED CASES OF THE DISEASE IN CERTAIN AGE GROUPS.

	Under 1 year.	From 1 to 5 years.	From 5 to 15 years.	From 15 to 25 years.	From 25 to 65 years.	TOTAL.
Males ...	2	50	130	17	6	205
Females	3	48	157	15	7	230
Total ...	5	98	287	32	13	435

TABLE 42. NORTHAMPTON, 1913.
SCARLATINA. NUMBER OF NOTIFICATIONS AND REMOVALS TO HOSPITAL
EACH MONTH.

Month.	Notifica- tions.	Removed to Hospital.	Percentage removed.
January	52	34	65.4
February	23	22	95.6
March	25	13	52.0
April	32	22	68.7
May	22	16	72.7
June	16	11	68.7
July	34	30	88.2
August	29	23	79.3
September	41	30	73.2
October	43	27	62.8
November	46	26	56.5
December	72	28	38.9
YEAR	435	282	64.8

299 of the cases were amongst children attending public elementary schools, a percentage of 68.7 of the total notified. In 1912, this percentage was 71.3, and the average annual proportion during the last six years was 59.4.

Table 43 shows, as in former years, the distribution of the disease in the various municipal wards. Owing, as I have already mentioned, to my inability to approximately estimate the populations of these wards I am unable to give the attack rates.

TABLE 43. NORTHAMPTON, 1913.
SCARLATINA. DISTRIBUTION OF NOTIFIED AND PRESUMABLY GENUINE
CASES THROUGHOUT THE MUNICIPAL WARDS.

	Abington	Castle	Delapre	Kingsley	Kingsthorpe	North	South	St. Crispin's	St. Edmund's	St. James'	St. Lawrence	St. Michael's	Total
Notified Cases ...	30	33	11	25	40	43	29	29	43	32	62	58	435
Presumably Genuine Cases ..	28	33	11	25	39	43	27	29	43	31	61	55	425

DIPHTHERIA AND MEMBRANOUS CROUP. I dealt with this group of diseases at some length in my report for 1911 and 1912, and have not much to add by way of general comment in the present report. The increase of diphtheria in the community noted during these former years continued during the year under present consideration, and, indeed, the number of cases notified distinctly increased. This number reached 119. Originally it was 120, but one notification was withdrawn by the medical practitioner notifying, as the diagnosis was found to be incorrect. Compared with the numbers in the two preceding years, that for 1913 was nearly double. The sickness rate was 1.31 per 1,000, compared with 0.70 in 1912, and 0.76 in 1911, and an annual average of 0.45 in the decennium 1903-1912. Further investigation indicated, however, that 10 of these were cases really belonging to the County, which were being treated mostly in the General Hospital, so that the Northampton cases notified only numbered 109. Careful observation in the cases of a number of these eventually showed that 11 of them at least proved not to be cases of diphtheria, and thus the presumably genuine diphtheria or membranous croup cases which occurred amongst Northampton residents were reduced to 98, although there must be added to this number two in which the death was certified as due to this disease although they were not notified as such during life. The net number, therefore, may be taken as 100.

It is well to note at this stage the following figures for comparison :—

	Attack rate per 1000
England and Wales	1.39
Aggregate of 74 English County Boroughs	1.48
Aggregate of 4 Welsh County Boroughs	1.86
London	1.70
Northampton (original 119 cases)	1.31

Of the 78 County Boroughs in England and Wales, 41 had a higher sickness rate, and 36 a lower, than Northampton, so that even with our markedly increased numbers the disease is still less prevalent in the town than in most other similar communities. There were 27 deaths registered, including the two in which the disease was not previously notified, and the death-rate was 0.30 per 1,000, compared with 0.13 in 1912, and an annual average of 0.11 for the decennium 1903 to 1912.

In England and Wales in 1913, the death-rate was 0.12, in the great towns 0.13, and in the smaller towns 0.11. This indicates that although the proportion of our cases was definitely below that of the average for the rest of the country, our death-rate was more than double this average.

If we compare the fatality of the disease in Northampton and elsewhere (*i.e.*, the mortality amongst the cases notified), we find the following :—

England and Wales	8.5 per cent.
Aggregate of the 78 County Boroughs in England and Wales	10.34 per cent.
London.....	5.6 per cent.
Northampton.....	27.0. per cent.

In calculating the local fatality I have added the two deaths registered in which the cases had not previously been notified, and have counted them amongst the cases of diptheria, bringing this figure up, as I stated above, to 100. These figures indicate that the type of the disease in the town must have been much more severe and fatal than in most other localities, as more than a quarter of the cases died. The average annual figure for the ten years 1903 to 1912, was 25.5 per cent.

Table 44 shows the distribution of cases throughout the Wards in the Town.

TABLE 44. NORTHAMPTON, 1913.
DIPHTHERIA. DISTRIBUTION THROUGHOUT THE MUNICIPAL WARDS OF
ORIGINALLY NOTIFIED CASES AND OF THOSE BELONGING TO NORTHAMPTON
ONLY WHICH WERE PRESUMED TO BE GENUINE CASES.

	Abington	Castle	Delapre	Kingsley	Kingsthorpe	North	St. Crispin's	St. Edmund's	St. James'	St. Lawrence	St. Michael's	South	Total
Notified Cases	12	8	2	4	7	11	10	16	10	8	11	20*	119
Presumably Genuine Northampton Cases	11	7	2	4	7	10	9	15	9	5	10	9	98

*10 of these were cases notified from the General Hospital which had come into that institution from the County and did not belong to the Borough and were not therefore Northampton Cases.

TABLE 45. NORTHAMPTON, 1903—1913. DIPHTHERIA AND MEMBRANOUS CROUP.

Year.	Popu- lation.	Notifica- tions.	Attack Rate per 1,000.	Deaths.	Death- rate.	Case Mortality per cent.	Zymotic Death-rate	General Death- rate.	Numbers Removed to Hospital.	Removal rates per cent.
1903	87699	39	0.44	18	0.20	46.1	1.4	13.9	3	7.7
1904	88002	48	0.54	9	0.10	18.7	1.6	13.5	13	27.1
1905	88306	31	0.35	14	0.16	45.2	1.1	13.1	6	19.3
1906	88610	28	0.32	7	0.08	25.0	0.9	12.0	9	32.1
1907	88915	28	0.31	5	0.06	17.8	1.0	12.9	19	67.9
1908	89223	26	0.29	4	0.04	15.4	0.8	12.8	16	61.5
1909	89534	36	0.40	10	0.11	27.8	0.9	14.4	16	44.5
1910	89843	36	0.40	6	0.07	19.3	1.0	12.6	27	75.0
1911	90152	69	0.76	14	0.15	20.3	1.5	13.3	53	76.8
1912	90467	63	0.70	12	0.13	19.0	0.9	12.1	42	66.7
1913	90793	119	1.31	27	0.30	22.7	1.3	13.0	71*	59.7

* 47 to Borough Hospital, 24 to General Hospital.

The figures in this table refer to the Cases actually notified in the Borough whether belonging to the Town or County and without subsequent correction of diagnosis.

TABLE 46. NORTHAMPTON, 1913.

DIPHThERIA. PRESUMABLY GENUINE NORTHAMPTON CASES NOTIFIED
(INCLUDING THOSE TWO WHO DIED WITHOUT BEING NOTIFIED)).
AGE AND SEX DISTRIBUTION.

	Under 1 year	1 to 2	2 to 3	3 to 4	4 to 5	5 to 15	Over 15	Total
Male .....	...	3	2	6	9	30	3	53
Female	1	2	2	2	3	32	5	47
Total	1	5	4	8	12	62	8	100

It will be seen from the foregoing tables that no Ward in the Town was spared, Delapre and Kingsley suffering least, whilst St. Edmund's showed the highest number.

TABLE 47. NORTHAMPTON, 1913.

DIPHThERIA. PRESUMABLY GENUINE NORTHAMPTON CASES NOTIFIED
DURING EACH MONTH OF THE YEAR.

Jan.	Feb.	Mar.	Apr.	May	Jun.	July	Aug.	Sep.	Oct.	Nov.	Dec.	Total.
10	3	6	4	4	1	5	5	9	9	15	27	98

66 of the 100 presumably true Northampton cases occurred amongst scholars attending public elementary schools. This is not a very high proportion, considering that this disease is most prevalent amongst children of school age. I do not consider that there was at any particular time an excessive prevalence of true diptheria in any one school throughout the year though in Vernon Terrace, Barry Road, Stimpson Avenue, and Kettering Road Schools, there were on occasions an unusual number of sore throats of doubtful character, and, indeed, towards the end of the year this condition was common to a great number of the Infants' Departments, so much so that most of these premises were specially cleansed and disinfected during the Christmas holidays, at my suggestion.

TABLE 48. NORTHAMPTON, 1913.

DIPHTHERIA. PRESUMABLY GENUINE NORTHAMPTON CASES NOTIFIED, (INCLUDING THE TWO CASES WHICH DIED WITHOUT NOTIFICATION) AMONGST SCHOLARS ATTENDING THE PUBLIC ELEMENTARY SCHOOLS OF THE TOWN.

SCHOOLS.	DEPARTMENTS.			TOTAL.
	Boys	Girls	Inf'ts.	
All Saints .....	...	2	2	4
Barry Road	3	4	5	12
Campbell Square .....	...	...	1	1
Far Cotton	1	...	...	1
Kettering Road	1	1	3	5
Kingsthorpe	1	1	...	2
Kingsthorpe Grove.....	1	...	...	1
Military Road .....	...	...	1	1
St. Andrew's	1	...	1	2
St. Edmund's	2	...	1	3
St. George's	1	2	2	5
St. Giles .....	...	...	2	2
St. Katherine's .....	...	...	1	1
St. James' .....	...	...	2	2
St. James' Road .....	...	...	2	2
St. Mary's	2	...	...	2
St. Matthew's	1	...	...	1
St. Paul's	1	...	2	3
St. Peter's	1	...	3	4
Stimpson Avenue .....	...	...	3	3
Spring Lane.....	1	2	...	3
Vernon Terrace	2	2	2	6
	19	14	33	66

Thirteen presumably genuine cases seem to have been infected while in the General Hospital, but of these 8 belonged to the County.

In the 88 households from which the 100 genuine cases came, there were only 11 which produced more than one, and from only one of these were more than two cases notified. It is also noteworthy that in only nine streets were more households than one attacked, and in three of these only were more than two affected. Thus, although no satisfactory explanation of the increased prevalence can be given, unless on the hypothesis that the infection was carried by unrecognised cases, the evidence in support of this even is by no means conclusive, at least during the period under consideration.

In only 56 of the 119 originally notified cases were the secretions submitted for bacteriological examination. As the result of this 10 were shown not to be diphtheria cases. Of the remaining 46 in 13 the report of the bacteriologist was negative, but each of these was a typical clinical case requiring no bacteriological aid in diagnosis, such aid being only sought for the purpose of ascertaining when the case was free from infection, at the end of the illness.

Twenty-four cases were treated in the General Hospital, seven of which, however, were County cases. 47 cases were treated in the Borough Hospital, two of which belonged to the County and were removed to this Institution from the General Hospital. In quite a number of instances the disease appears to have been so severe that death took place either before the notification reached the Public Health Office, or before any effort could be made by the Department to deal with the case.

TYPHOID FEVER. There were 27 cases of this disease notified. One was a County case, and two proved on subsequent observation not to be typhoid fever. The number of presumably genuine Northampton cases, therefore, is reduced to 24. The annual average number of notified cases in the preceding decennium was 29, so that although the prevalence compared with 1912 was distinctly greater it was still below the previous average. The attack rate was 0.30 per 1,000, the yearly average for the preceding decennium being 0.32. In the whole country the attack rate was 0.22, and for the English County Boroughs 0.25.

Four deaths occurred amongst the 27 notified cases. The death-rate was, therefore, 0.04 per 1,000. The annual average number of deaths for the preceding 10 years was four, and the death-rate was 0.05. In England and Wales during 1913, it was 0.04, in the great towns 0.04, in the smaller

TABLE 49. NORTHAMPTON, 1903—1913. TYPHOID FEVER.

Year.	Popu- lations.	Notifica- tions.	Attack Rates per 1,000.	Deaths.	Death- rates.	Case Mortality per cent.	Zymotic Death-rates.	General Death- rates.	Numbers removed to Hospital.	Removal rates per cent.
1903	87699	25	0.28	6	0.07	24.0	1.4	13.9	7	28.0
1904	88002	30	0.34	...	...	...	1.6	13.5	8	26.6
1905	88306	23	0.26	1	0.01	4.3	1.1	13.1	13	56.5
1906	88610	34	0.38	10	0.11	29.4	0.9	12.0	22	64.7
1907	88915	38	0.43	3	0.03	7.9	1.0	12.9	29	76.3
1908	89223	33	0.37	5	0.05	16.6	0.8	12.8	22	63.3
1909	89534	10	0.11	3	0.03	30.0	0.9	14.4	7	70.0
1910	89843	24	0.27	3	0.03	12.5	1.0	12.6	22	91.7
1911	90152	53	0.59	11	0.12	20.7	1.5	13.3	40	77.4
1912	90467	16	0.18	2	0.02	12.5	0.9	12.1	12	75.0
1913	90793	27	0.30	4	0.04	14.8	1.3	13.0	15*	55.6

*10 to Borough Hospital, 5 to General Hospital.

towns 0.05, and in London 0.02. The fatality of the disease was 14.8, compared with 15.8 as the annual average fatality in the decennium 1903-1912, 18.2 for the whole country in 1913, and 19.8 for the aggregate of the County Boroughs in England and Wales.

Five of the notified cases were removed to the General Hospital, and 10 to the Borough Hospital, making the total treated in hospital 55.6 per cent. There is a record of bacteriological examination in connection with six of the cases. In four the result of this corroborated the clinical diagnosis, and in two this diagnosis was contradicted. In one of these latter cases, however, in spite of two negative results after the Widal re-action, and one negative in connection with the re-action for para-typhoid, the clinical signs and symptoms, were perfectly typical, and the case has been regarded as genuine. In only 17 households in the town did presumably genuine cases occur, and in only four of these were there more cases than one.

TABLE 50. NORTHAMPTON, 1913.

TYPHOID FEVER. DISTRIBUTION THROUGHOUT THE VARIOUS WARDS OF THE CASES NOTIFIED AND THOSE PRESUMABLY GENUINE CASES BELONGING TO THE BOROUGH.

CASES.	Abington	Castle	Delapre	Kingsley	Kingsthorpe	North	St. Crispin's	St. Edmund's	St. James'	St. Lawrence	St. Michael's	South	Borough
Notified.....	1	7	.	.	.	1	1	3*	2	.	9	3	27
Presumably Genuine Northampton	1	6	.	.	.	1	1	2	1	.	9	3	24

*One—a County Case.

BOROUGH HOSPITALS.

SMALL-POX HOSPITAL, HARDINGSTONE. The situation and accommodation of this Institution has already been explained in former reports. As before the hospital remained closed throughout the year, but in perfect readiness for immediate use.

WELFORD ROAD HOSPITAL. This Institution, which has in recent years been kept closed, except when required as an overflow hospital for scarlatina cases, was again throughout the year not in use, but kept ready if wanted.

As I mentioned in my last report, it was contemplated using this institution as a part of the complete scheme of anti-tuberculosis measures in connection with the National Insurance Act. During 1913, this scheme was generally approved by the Local Government Board, and towards the end of the year the work of extending and re-arranging this institution was begun, with the sanction of the Government. It is hoped that during 1914, the Institution will be in full working order as a tuberculosis hospital.

HARBOROUGH ROAD HOSPITAL, KINGSTHORPE. This hospital, as in recent years, was in use during the year for the double purpose of isolating on the one hand cases of scarlatina, diphtheria, and typhoid fever, and on the other hand cases of pulmonary tuberculosis in the later stages.

TABLE 51. NORTHAMPTON, 1913.

BOROUGH HOSPITALS. NOTIFIED CASES OF COMMUNICABLE DISEASE UNDER TREATMENT DURING THE YEAR.

Disease.	No. left in Hospital at the end of 1911.	Number in 1912.			
		Admitted.	Discharged.	Died.	Remaining.
Scarlatina ...	42	282	279	3*	42
Enteric Fever ...	0	10	3	3	4
Diphtheria ...	3	47	30	8	12
TOTAL ...	45	339	312	14	58

*One of these proved to be a case of Measles not Scarlatina, and died of Broncho-pneumonia.

The above particulars, and those immediately following, refer to the main portion of the hospital, used for the isolation of fevers. Those referring to the isolation of tuberculosis will be found under the heading of this disease in a former part of this report.

There were 45 fever cases in the Institution at the end of 1912, and these along with 339 admitted during the year make a total of 384 under treatment. 58 of these remained at the end of the year, and of the others which completed their terms of isolation, 14 (4.3 per cent.) died, and 312 were discharged. 324 cases of scarlatina were under treatment, 42 of which remained at the close of the year, and there were 3 deaths (about 1.1 per cent.). Six cases notified as typhoid fever completed their treatment, three of which died, the fatality being, therefore, 50 per cent. 38 cases notified as diphtheria completed treatment, and of these eight died, a fatality of 21.1 per cent.

TABLE 52. NORTHAMPTON, 1892—1913.

BOROUGH HOSPITAL, HARBOROUGH ROAD. NUMBER OF ADMISSIONS
SINCE 1892.

SCARLATINA.	ENTERIC FEVER.	DIPHTHERIA.	SMALLPOX.	TOTAL.
5893	335	189	49	6466

CLINICAL WORK. TYPHOID FEVER. Ten patients were admitted in which the disease was notified as typhoid fever, and six of these completed their term of isolation during the year. Of these six, however, two were found not to be typhoid fever, and of the four genuine cases two died (50 per cent. fatality). One of the two which proved not to be typhoid fever died of splenic leuchæmia. The average length of stay of the two genuine cases which recovered was 53 days, and of the two genuine cases which died 31.5 days.

DIPHTHERIA. Three cases of diphtheria remained in the hospital at the end of 1912, and 47 cases notified with the disease were admitted. Of these, eight died, and 30 were discharged, leaving 12 in the hospital at the end of the year. 38 cases, therefore, completed their term of isolation. Eight of these latter after observation were found not to be cases of diphtheria (21 per cent.), and amongst the 30 genuine cases, the eight above noted died (a fatality of 26.7 per cent.). The fatality in 1912 amongst these cases was only 3.7 per cent., showing a much greater virulence during the year under present consideration. The average stay in the hospital of the 22 genuine cases which recovered was 48.3 days, and of the eight genuine cases which died, 6.75 days.

The particulars in the following case are rather interesting :—Hospital No. 23. Male. Aged $2\frac{1}{2}$ years. Admitted on September 9th with a sore throat, the appearance of which was more like follicular tonsilitis than diphtheria. Swabs were taken from the throat on the day of admission, on September 13th, and on September 28th, but none of them showed the presence of the diphtheria bacillus. The case was discharged on October 2nd, after 23 days in hospital, and the diagnosis made was follicular tonsilitis. The child was said to have shown signs of paralysis within the next week, and was admitted to the General Hospital ten days after discharge from the Borough Hospital, thought to be suffering from post-diphtheretic paralysis. While still under treatment at the General Hospital, nearly two months after admission, the child developed a sore throat (about December 5th), which suddenly became worse, and on December 19th was operated on (tracheotomy), and died on December 20th. Although no evidences of diphtheria could be discovered while the child was in the Borough Hospital, it apparently suffered afterwards from the form of paralysis which frequently follows diphtheria, although this form of paralysis is by no means unknown to occur after follicular tonsilitis. The second sore throat was apparently not developed until 64 days had passed after discharge from the Borough Hospital while the patient was still under treatment at the General Hospital for post diphtheretic paralysis. This second sore throat was diagnosed as diphtheria, and was apparently of so severe a type that tracheotomy was necessitated, and death followed.

SCARLATINA. 282 cases completed their period of isolation during the year. 12 of these, however (4.26 per cent.), showed no evidence of this disease on or after admission. Eight were apparently suffering from no recognised

pathological condition, one had diphtheria, one pulmonary tuberculosis, and one measles. This last died. Of the 270 true cases of scarlatina, two died, a fatality of 0.74 per cent. Four of these 270 genuine cases showed almost certainly evidences of true re-infection, that is, they underwent a second attack during convalescence, on the average 40.5 days after admission. Care was taken, particularly in those cases, over the diagnosis, but the evidence seemed quite conclusive. This number indicates a percentage of 1.5 compared with 2.6 in 1912. Several other cases were admitted with very doubtful evidences of the disease, but developed it later while in hospital, but on account of the element of doubt these are not included in the above figure. The average stay in hospital of the true cases which recovered was 53.4 days, and of the two genuine cases which died 31.5 days. Five patients showed no sign of the disease on admission, but developed it later, on the average 17.6 days after admission.

TABLE 53. NORTHAMPTON, 1894—1913.

BOROUGH HOSPITALS. FATALITY AMONGST CASES NOTIFIED AS SCARLATINA
IN WHICH TREATMENT WAS COMPLETED IN EACH YEAR SINCE 1894.

Year.	Death-rate per cent.	Year.	Death-rate per cent.	Year.	Death-rate per cent.
1894	1.0	1900	2.8	1906	2.4
1895	3.6	1901	1.7	1907	3.2
1896	2.6	1902	1.6	1908	1.4
1897	4.1	1903	2.4	1909	0.5
1898	2.5	1904	1.1	1910	—
1899	3.0	1905	1.4	1911	0.8
				1912	0.5
				1913	1.1
Average for 6 years	2.8	Average for 6 years	1.8	Average for 8 years.	1.2

The average fatality for the 20 years was 1.89 per cent.

TABLE 54. NORTHAMPTON, 1913.

BOROUGH HOSPITAL. SCARLATINA. RECORD OF THE COMPLICATIONS WHICH OCCURRED AMONGST THE 270 GENUINE* CASES OF THE DISEASE IN HOSPITAL IN WHICH THE TREATMENT WAS COMPLETED IN 1913.

	Otorrhœa.			Rhino- rrhœa.	Adenitis.	Glandular Abscess.	Mastoid Abscess.	Arthritis.	Albuminuria.	Nephritis.	Secondary Sore Throat.	Relapse (reinfection).	Other.	Total number of Cases with Complications.
	Double.	Right only.	Left only.											
Number of Cases Proportion (per cent) of All Gen- uine Hospital Cases.....	5 1.85	10 3.7	4 1.5	12 4.5	22 8.15	3 1.2	—	3 1.2	41 15.2	—	—	4 1.5	11 4.1	84 31.2

* The 12 cases in which no definite signs of the disease were noted during stay in Hospital are not included in the calculations on which these figures are based.

23 instances of other inter-current infective disease occurred, *e.g.*, measles 14, diphtheria 5, chicken-pox 1, measles and diphtheria 1, whooping cough and diphtheria 1, measles and chicken-pox 1. 32 cases were admitted with ring-worm, 23 of which were apparently cured before discharge.

SO-CALLED "RETURN" CASES OF SCARLATINA. It is somewhat difficult to define what is called a "return" case of scarlatina, and, therefore, one has to state in the first instance what has been accepted here as a "return" case. All new cases of scarlatina what have occurred, either in the same house, or from contact with it, within a period, not less than 24 hours, and not more than 28 days, after the return of a previous patient from the hospital, have been counted as "return" cases. For the sake of ease of reference, the new case arising from this possible connection is designated the "return" case, while the previous case discharged from hospital is called the "infecting case." These terms are, however, applied here quite independently of the reality or otherwise of any casual relationship. The "return" cases investigated in this report are those the treatment of which was completed in hospital during 1913.

TABLE 55. NORTHAMPTON,
RELATIONSHIP BETWEEN SO-CALLED "RETURN" CASES (THE ISOLATION
"INFECTING" CASES WHICH MAY HAVE
POSSIBLE "INFECTING" CASES.

Number in Register of M.O.H.	Number in Hospital Register.	Initials.	Age.	Number of days in Hospital.	Complica- tions recorded while in Hospital.	Abnormal conditions noted on Discharge from Hospital.	Date of Discharge from Hospital.	Interval be- tween Discharge of possible 'Infecting Case' and onset of illness in so called "Return Case."
12 236	201	W.A.T	3	68	Measles, 9-12-12 Diphtheria, 13-12-12 Stye in Eye	—	17-1-13	25 days
12 211 12 213	175 177	R.N. M.N.	5 9	44 49	— Chronic Blepharitis	— —	29-11-12 5-12-12	15 days 9 days
13 — 11	6	C.M.	5	44	—	Slight Chronic enlargement of tonsils	19-2-13	2 days
13 — 31	19	K.T.	6	48	...	—	11-3-13	14 days 15 days
13 — 67	48	C.A.	4	73	Left Otorrhœa Ringworm on admission	Ringworm apparently cured	3-5-13	22 days
13 — 80	61	J.B.	6	63	Adenitis	...	9-5-13	3 days 3 days 7 days
13 — 137	94	A.B.	4	52	Left Otorrhœa	...	27-6-13	12 days
13 — 229	167	E.S.	3	45	—	Chronic enlargement of tonsils	10-10-13	7 days 19 days 20 days 19 days 23 days

1913. SCARLATINA.

OF WHICH WAS COMPLETED DURING 1913), AND THE POSSIBLE COMMUNICATED THE DISEASE TO THEM.

SO-CALLED "RETURN" CASES.

Number in Register of M.O.H.	Number in Hospital Register.	Initials.	Age.	Date of Admission to Hospital.	Number of days in Hospital.	Complications recorded while in Hospital.	REMARKS.
13 — 61	42	A.F.T.	7	13-2-13	51	—	—
12 — 264	223	A.N.	12	16-12-12	47	—	—
13 — 74	53	F.M.	3	25-2-13	59	—	—
13 — 91 13 — 92	64 65	M.T. S.T.	31 3	26-3-13 26-3-13	44 44	Albuminuria —	— —
13 — 154	106	C.A.	6	29-5-13	47	Epilepsy	—
13 — 147 13 — 148 13 — 151	101 102 104	J.H. E.B. F.B.	23 5 10	15-5-13 15-5-13 19-5-13	48 52 48	Slight Albuminuria — —	— — —
13 — 177	122	E.B.	5	11-7-13	47	—	—
13 — 295 13 — 314 13 — 317 13 — 315 13 — 321	215 226 227 228 232	A.V.S. E.S. S.S. G.S. G.S.	2 6 11 14 8	18-10-13 31-10-13 31-10-13 31-10-13 4-11-13	44 46 50 46 52	Albuminuria — — — —	— — — — —

DIARRHŒA AND ENTERITIS. I stated in the previous year's report that a new system of classification of deaths from diarrhœal disease was introduced by the Registrar General in 1911, and thus under the heading "diarrhœa and enteritis" are now included for all practical purposes such deaths as had up to that time been grouped under the heading "diarrhœal diseases" in the Local Government Board's Infant Mortality Table, with the age limit now fixed at under 2 years. It is, therefore, only possible to accurately compare the statistics of the last three years—1911, 1912, and 1913.

42 deaths were registered in 1913, and classified under this heading. This gives a death-rate of approximately 0.46 per 1,000 living, or 22.5 per 1,000 births registered during the year. In 1912, the death-rate was 0.12 per 1,000 living, or 5.68 per 1,000 births registered in that year.

TABLE 56. NORTHAMPTON, 1911-13.
DIARRHŒA AND ENTERITIS. DEATHS AND DEATH-RATE IN EACH YEAR
AND IN THE THIRD QUARTER OF EACH YEAR.

	1911		1912		1913	
	Number of Deaths	Death Rate	Number of Deaths	Death Rate	Number of Deaths	Death Rate
Whole Year ...	100	1.11	11	0.12	42	0.46
Third Quarter of Year	95	4.21	5	0.22	18	0.79

It will be seen that 18 of the 42 deaths occurred in the third quarter. This is the period when the disease is usually at its height. On referring to the above Table, however, it will be seen that the larger proportion of the deaths which occurred in the third quarter in 1911, is greatly reduced in both 1912 and 1913. This means that the deaths in each of the two latter years were much more widely distributed throughout the twelve months, and much less concentrated in the third quarter than was the case in 1911. The death-rate per 1,000 births within the year, which seems to be the new method of gauging the mortality adopted by the Registrar General, was, as stated above 22.5.

TABLE 57. NORTHAMPTON, 1913.

DIARRHŒA AND ENTERITIS. PARTICULARS OBTAINED AFTER INVESTIGATION OF CERTAIN CIRCUMSTANCES IN CONNECTION WITH CASES WHICH DIED FROM THIS GROUP OF DISEASES.

	MONTHS IN WHICH DEATH OCCURRED.												Total.
	Jan.	Feb.	Mar.	Apr.	May	Jun.	July	Aug.	Sep.	Oct.	Nov.	Dec.	
Feeding—													
Breast only	I	I	I	...	I	...	...	4	I	2	...	...	II
Bottle only .....	...	I	...	...	I	...	..	I	3	6	I	I	14
Breast & bottle	I	...	...	...	...	I	4	2	3	2	...	...	13
Breast & spoon	...	...	...	...	I	...	...	...	...	...	...	...	I
Total	2	2	I	...	3	I	4	7	7	10	I	I	39
Bottle Used—													
Long Tube .....	...	...	...	...	...	...	2	...	2	I	I	...	6
Boat shape	I	I	...	...	I	I	2	3	4	7	...	I	21
Total ...	I	I	...	...	I	I	4	3	6	8	I	I	27
Milk boiled	I	...	...	...	I	I	3	I	5	8	...	I	21
Physique—													
Good	I	2	I	...	2	...	3	3	4	8	I	...	25
Fair	I	...	...	...	I	I	I	4	3	2	...	I	14
Poor or Puny ...	...	...	...	...	...	...	...	...	...	...	...	...	...
Total ...	2	2	I	...	3	I	4	7	7	10	I	I	39
House—													
Clean	I	I	I	...	I	I	2	I	4	6	...	...	18
Fairly Clean ...	I	I	...	...	I	...	2	5	3	3	I	I	18
Dirty ... ..	...	...	...	...	I	...	...	I	...	I	...	...	3
Total ...	2	2	I	...	3	I	4	7	7	10	I	I	39
Circumstances—													
Comfortable] ...	2	2	I	...	2	I	2	I	7	9	...	I	28
Poor .....	...	...	...	...	I	...	2	6	...	I	I	...	11
Total ...	2	2	I	...	3	I	4	7	7	10	I	I	39

In England and Wales it was 23.4, in the great towns 29.3, in the smaller towns 24.7, and in the rural districts 14.4. Our record, therefore, compares favourably with all these, excepting that of the country districts. Eight of the deaths occurred in children between one and two years of age, and two in children under one month old. Of the total 42, two occurred outside the district of children of Northampton residents, and it was impossible to investigate the circumstances, while in one other case the particulars could not be obtained. It was only in 39, therefore, that the conditions under which the children were reared were investigated by the Health Visitors. The results of these investigations are shown in tabular form on page 65.

ACUTE POLIOMYELITIS AND CEREBRO-SPINAL FEVER. These diseases, which are now considered to be communicable, have been made compulsorily notifiable to the Medical Officer of Health by the medical practitioners since the coming into operation of the Public Health (Cerebro-Spinal Fever and Acute Poliomyelitis) Regulations, 1912, made by the Local Government Board under powers given by section 130 of the Public Health Act, 1875, as amended by the Public Health Act, 1896. When the Regulations became operative in the latter part of 1912, each practitioner was circularised by the Borough Council, and copies of the Memoranda on these diseases by the Board's Medical Officer were sent to each. Free bacteriological examination of the patients' discharges, secretions, etc., was offered on behalf of the Council to any practitioner; disinfection of fomites and premises is carried out by the Local Authority; and, if necessary, hospital isolation may be made use of.

Five cases of Acute Poliomyelitis were notified during 1913. One was in a girl of 17 years old, in the General Hospital, from Buckingham, in January, and was, therefore, not a Borough case. A second was in a child of one year old, in Bouverie Street, in July. The diagnosis in this case seems to have been difficult, as the signs and symptoms were also suggestive of acute meningitis. The case died about a week later without the diagnosis being definitely cleared up. A third case was notified in November, in a child of $1\frac{3}{4}$ years old, in Essex Street, and another in the same month, from Albert Street, in a child of about the same age. In these two latter cases the nature of the disease does not seem to have been realised until the acute symptoms had passed off and the stage of infantile paralysis had set in. The last case occurred in December, also in a child of $1\frac{1}{2}$ years, in Melbourne Street. It was a mild case, and its nature also escaped detection till the late paralytic stage had set in.

None, except the one noted above, died. All seemed to have suffered from paralysis more or less in the later stages, and no spread of the infection could be traced from any one of them. No bacteriological examination was made, as none of the cases were suspected in the acute stage.

Disinfection was carried out in the households of the four Borough cases, and observation was kept on them for some time, but no further developments ensued.

There were no cases of cerebro-spinal fever notified.

A detailed report of the above cases was sent in January, 1914, to the Local Government Board, in accordance with the terms of the Circular of the Board of August, 1912.

PUERPERAL FEVER. Only two cases of puerperal fever were notified and again, as in 1912, there were no deaths.

This I consider a very satisfactory record. Five deaths, however, were classified as due to other diseases or accidents of child-birth, so that the number attributed by the practitioner in attendance, directly or indirectly, to child-birth was a proportion of one in 374 live births registered. Again I have to state that this proportion seems higher than it really is, as it does not take into account a number of still-births, which were not registered.

The attack rate of puerperal fever in England Wales was 0.05 per 1,000, in the English County Boroughs 0.07, in London 0.08, and in Northampton 0.02 per 1,000.

TABLE 58. NORTHAMPTON, 1904—1913.
PUERPERAL FEVER. CASES NOTIFIED, DEATHS REGISTERED AND FATALITY
OF THE DISEASE IN EACH OF THE LAST TEN YEARS.

YEAR.	1904	1905	1906	1907	1908	1909	1910	1911	1912	1913	TOTAL.
Cases	4	1	2	5	10	3	1	5	4	2	37
Deaths .....	...	...	2	3	6	2	...	3	...	...	16
Fatality .....	...	...	100	60	60	67	...	60	...	...	43

One of the cases occurred after a difficult labour, and the second followed the birth of an illegitimate child. There appears to have been a medical practitioner in attendance at both confinements.

MIDWIVES' ACT, 1902. Eighteen registered midwives intimated their intention to practise in the Town in 1913, but before the end of the year one of these had resigned. Most of the women had been in *bona fide* practice before the passing of the Act, three held the L.O.S. Diploma, one the Certificate from Queen Charlotte's Hospital, and several held the certificate of the Central Midwives' Board.

The following notifications in compliance with the terms of the Act were received from 10 midwives, viz. :—

78 records of sending for medical help ;
23 notifications of still-birth ; and
14 notifications of the death of a child.

There were no notifications of the death of a mother. As in former years, most of the circumstances of the above were investigated, and I have no reason to complain in any instance of the conduct of a midwife. In one or two cases the midwife did not send the requisite notification until her attention was called to the fact, and generally speaking the records were not kept in a way to be desired, as the midwives are, with a few exceptions, rather illiterate women. Again, as in former years, the practice was almost entirely in the hands of three or four of the more careful and better educated.

BACTERIOLOGY. During 1913, the facilities offered through the Public Health Department at the public expense to any medical practitioner in the Town of obtaining bacteriological diagnosis in suspected cases of diphtheria, typhoid fever, and tuberculosis, were taken advantage of to a much greater extent than in any former years. This work, as before, was done at the Lister Institute of Preventive Medicine, and the reports were of considerable value when interpreted intelligently.

The next Table will show the number of cases examined, and the number of reports received.

TABLE 59. NORTHAMPTON, 1913.

CLINICAL BACTERIOLOGY. NUMBER OF SUSPECTED CASES OF DIPHTHERIA, ENTERIC FEVER, AND PULMONARY TUBERCULOSIS IN WHICH EXAMINATION WAS MADE, AND THE NUMBER AND NATURE OF THE REPORTS RECEIVED IN CONNECTION WITH THESE.

DIPHTHERIA—Throat and Nose Secretions.				ENTERIC FEVER.—Widal's Tests.				PULMONARY TUBERCULOSIS.				TOTAL.			
Number of Suspected Cases Examined.	Reports Received.			Number of Suspected Cases Examined.	Reports Received.			Number of Suspected Cases Examined.	Reports Received.			Number of Suspected Cases Examined.	Reports Received.		
	Positive.	Negative.	Total.		Positive.	Negative.	Total.		Positive.	Negative.	Total.		Positive.	Negative.	Total.
93	70	140	210	6	4	4	8	188	75	142	217	287	149	286	435

It will be noted that in 93 suspected cases of diphtheria 210 reports were received. More of these reports were made to test if the patient's secretions had become free from the specific infection before discharging him from Hospital, or permitting him to return to school, than for the sake of diagnosis in the earlier stages. The number of suspected cases of tuberculosis in which sputum was examined was more than three times that in 1912. This was largely due to the extension of our efforts to deal with this disease, consequent on the coming into force of the National Insurance Act. Next year when the Anti-tuberculosis Dispensary is in full working order, most, if not all, of this work will be done at this Institution by the Tuberculosis Officer.

METEOROLOGY. Table 60 which follows, gives certain meteorological data for the year 1913. The Table is arranged on similar lines to those given in previous years, and is constructed from figures supplied to me monthly by Mr. R. H. Primavesi.

The total rainfall for 1913 was 23.22 inches, while in 1912 it was 31.96 inches, a decrease of 8.74 inches. It was less by 1.06 inches than the annual average for the nine years 1904-1912. The number of rainy days was 173, while in 1912 it was 200, while the annual average in the nine yearly period above referred to was 178.

The mean temperature of each year since 1905 has been given in these annual reports and such records show that the mean temperature of 1913

TABLE 60 NORTHAMPTON, 1913. METEOROLOGICAL DATA.

MONTH.	RAINFALL.				TEMPERATURE.						DIRECTION OF WIND.				Quarters.
	Total inches.	Greatest in 24 hours.		Days in which 0.01 in. or more fell	Mean.	Maximum.		Minimum.		No. of Nights at or below 32 deg.	S. W. Quadrant including W. Days.	S. E. Quadrant including S. Days.	N. E. Quadrant including E Days.	N. W. Quadrant including N. Days.	
		Depth.	Date.			Deg.	Date.	Deg.	Date.						
January ...	3.55	0.93	11	18	39.76	50.6	5	24.3	13	10	8	16	1	6	
February...	0.75	0.22	9	9	39.76	55.5	9	27.4	23	14	10	7	9	2	
March ...	2.89	0.60	16	20	44.28	57.4	23	27.2	18	3	14	3	5	9	
April ...	2.63	0.51	11	19	47.07	66.3	23 & 24	27.9	13	4	9	9	10	2	
May ...	1.35	0.71	3	12	54.76	83.2	26	35.4	8	...	13	6	5	7	
June ...	0.69	0.2	6	9	60.46	83.7	16	41.0	8	...	10	4	4	12	
July ...	1.21	0.29	6	15	58.58	76.2	1	46.8	9	...	4	1	17	9	
August ...	0.60	0.25	31	11	59.55	80.1	28	40.6	19	...	7	3	12	9	
September	1.52	0.83	1	11	60.12	77.5	27	41.4	10	...	3	8	12	7	
October ...	5.05	0.90	3	18	51.50	65.2	1	27.9	24	2	6	10	11	4	
November	2.18	0.59	10	17	45.90	57.3	17	25.6	23	4	18	7	...	5	
December	0.80	0.33	4	14	38.31	54.1	12	25.4	31	10	14	1	9	7	
YEAR 1913	23.22	0.93	Jan. 11	173	50.00	83.7	Jun. 16	24.3	Jan. 13	47	116	75	95	79	

was 50.00° Fahr., that of 1912 49.78°, and the annual average for the eight years, 1905–1912 48.58°. The year under present consideration in this report therefore was both hotter and drier than the average. The rainfall was least during the third quarter, when the temperature was maintained at its highest, and this undoubtedly had a great influence in increasing that extremely potent factor in infant mortality—summer diarrhoea.

DISINFECTION. There were nearly 1,000 more articles disinfected at the Disinfecting Station, St. Andrew's Road, during 1913 than during the previous year, owing to the greater number of cases of communicable diseases.

The next Table gives the number of those articles dealt with each month.

TABLE 61. NORTHAMPTON, 1913.
NUMBER OF ARTICLES DISINFECTED BY STEAM AT THE HEALTH DEPARTMENT
DISINFECTING STATION EACH MONTH.

Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept	Oct.	Nov.	Dec.	Total.
912	677	542	690	547	568	559	606	606	853	748	1016	8324

MEDICAL INSPECTION OF SCHOOL CHILDREN. The work of the medical inspection of school children during the year was carried out under my general supervision, as in former years.

Mr. E. D. Parsons, M.R.C.S., L.R.C.P., D.P.H., the Deputy and Assistant Medical Officer of Health acted during the first eight months as the Medical Inspector. In August, however, he took up his new duties as Tuberculosis Officer, having been appointed to this post in May. Dr. Parsons continues to act as Deputy and Assistant Medical Officer of Health in addition to his duties as Tuberculosis Officer. His post as School Medical Officer was filled by Mr. F. Bedingfield Macdonald, M.D., D.P.H., who was also appointed Assistant Medical Officer of Health, and took up his duties in October.

The Medical Officer of Health continues to act as supervising officer of the whole of the work, and is responsible for the general organisation. Except however as regards the examination of mentally defective children in connection with the Special School he takes no actual part in the routine inspection, and one of the Assistant Medical Officers of Health acts as the School Medical Officer. In this way the necessary co-ordination is obtained in the work of the Education and Public Health Departments.

In selecting children to be inspected the minimum requirements laid down by the Board of Education were in the main followed. Such children, therefore, comprised :—

- (a) { 1—Those who had been newly admitted to school ;
2—Those who would reach the age of 13 years within 12 months of the date of inspection ; and

(b) Those whose conditions seemed to the teacher, nurse, or medical inspector to require further advice, or re-examination as a result of previous medical inspection.

Owing, however, to the change of Inspectors in the middle of the year, the number of children examined in each of these groups was somewhat below the recent average. Table 62 shows the classification of these according to age and sex.

TABLE 62. NORTHAMPTON, 1913.

MEDICAL INSPECTION OF SCHOOL CHILDREN. NUMBER OF CHILDREN INSPECTED 1ST JANUARY, 1913, TO DECEMBER 31ST, 1913. A "CODE" GROUPS.

AGE.	ENTRANTS.						LEAVERS.					Grand Total
	3	4	5	6	Other Ages	Total	12	13	14	Other Ages	Total	
Boys	30	209	129	53	17	438	470	256	3	...	729	1167
Girls	19	241	154	78	18	510	423	76	2	...	501	1011
Totals	49	450	283	131	35	948	893	332	5	...	1230	2178

B.—GROUPS OTHER THAN "CODE." SPECIALS (INCLUDING RE-EXAMINATIONS).

Boys	157
Girls	288
Total	445

Besides these numbers however, over 2,000 cases were dealt with at the School Clinic during the year.

The year 1913 saw the inauguration of the school treatment clinic. As far back as the middle of 1911, I presented a report to the Education Authority showing the necessity for supplying treatment in many cases where the children were found defective by medical inspection. In that report I drew up a scheme suggesting how such treatment could be carried out. This report received the approval of the Board of Education and the Local Authority. Very suitable premises were obtained during the earlier part of 1913, the necessary re-construction of the premises was carried out ; and with the assistance of Dr. Parsons I was enabled to practically complete the equipment before the new School Medical Officer took up his duties. The new clinic, however, was not actually started till Dr. Macdonald came, though Dr. Parsons had previously, as in former years, carried on an inspection and a limited treatment clinic at his office in St. Giles' Street.

The staff of the school medical service besides the Medical Officer of Health and School Medical Officer, consists of the following full-time officers—a dental surgeon, two school nurses, a physical instructor, a clerk, and an assistant clerk ; while the part-time services of an ophthalmic surgeon and X-ray specialist are also retained. I think I may safely say that Northampton now possesses one of the most well adapted and equipped school clinics of any of the towns of similar size in the country. I do not say that it is yet complete, or even perfect as far as it goes, but no doubt extension and improvement will follow as the need arises.

The full particulars of the work being carried out at the clinic are given at some length in the report of the School Medical Officer, published in May.

The assistance of the school medical staff is made use of from the public health point of view in connection with the general hygiene of the school buildings, and the following paragraph in reference to this subject is taken from the report of the School Medical Officer. " The School Buildings, Class-Rooms, Halls, Lobbies, Cloak-Rooms, and outside Offices have been inspected during the year, both at the time of Routine Inspection and on other occasions. While the newer Schools are satisfactory on the whole, many of the older Schools are by no means pleasant seats of learning for the school child. In some cases, more especially that of All Saints' School, conditions are so bad, from every point of view, that nothing short of a cataclysm could seem to mend matters.

I have commented on this matter more especially in connection with this particular school in previous reports to the Education Committee, and each of

the former School Medical Officers (Drs. Mair and Parsons) has drawn attention in like manner. I may truly say that our opinion is unanimous that it is little short of impossible to make this School into a decent healthy institution for the education of the young. Attempts at improvement short of entire re-construction, if not even re-building, seem to us to be sheer waste of money.

I have already dealt with the measures adopted during the year for the control of infectious diseases amongst the school children.

WATER SUPPLY. I have in former reports described the sources of the water supply hitherto available, and need not here recapitulate, as the conditions during 1913 remained as in the previous year.

I stated in my last year's report that the Council was taking steps to secure a site for an additional reservoir, near to the present one at Ravensthorpe. This reservoir, which will be built in the Hollowell Valley some 8 or 9 miles from the Town in the County of Northampton, will impound the water from an area adjacent and similar in extent to the one at present. During 1913, Parliament passed the Northampton Corporation Waterworks Act, and the preliminaries were settled before the end of the year. It is expected that the work will be well in hand before many months have passed. The water will be an upland surface one, similar to that from Ravensthorpe. The Corporation will take steps to deal with the sewage on the gathering grounds, and will, as at present, have the water filtered before it is delivered to the Town.

I submitted during 1913, several samples of water, taken mostly on delivery in the Town, to bacterioscopic analysis. The bacteriologist (Mr. G. L. Eastes, of the Laboratories of Pathology and Public Health, London) reports that neither the bacillus coli communis nor the streptococcus were found in any quantity of the water up to and inclusive of 60 c.c. ; that the ratio of " blood heat " to " cool " organisms ranged from 1 : 17 to 1 : 113 ; and remarks that the water is " of a high degree of bacterial purity, and perfectly safe for drinking and domestic purposes."

A sample from a private well in Bridge Street was submitted to the Public Analyst for chemical analysis, as there were reasons to suspect its purity. The result was to show that there were indications of previous sewage pollution, and the Analyst considered the water unsafe. This was represented to the Owner, and the town's water has since been substituted.

SALE OF FOOD AND DRUGS ACTS. During 1913, 239 samples under this Act were purchased and submitted for analysis to the Public Analyst. This is about ten less than in the previous year. 154 of these were obtained officially in accordance with the procedure laid down by the Acts, and 85 were obtained informally without the vendor knowing the reason of the purchase. If, under the latter procedure, the sample is found not to be genuine, no legal proceedings can be taken, and this method is only adopted for the purposes of information.

TABLE 63. NORTHAMPTON, 1913.
FOOD AND DRUGS. SAMPLES TAKEN FOR ANALYSIS.
(a) INFORMAL SAMPLES.

Nature of Sample.	Total Number	Number Genuine.	Number not Genuine
Aerated Water	3	3	..
Bloater Paste	1	1	..
Boracic Acid	2	2	..
Butter	5	5	..
Castor Oil	3	3	..
Cheese	4	4	..
Citrate of Magnesia ..	2	2	..
Cod Liver Oil Emulsion	2	2	..
Coffee	3	3	..
Cream	5	2	3
„ (Preserved)	1	1	..
Dripping	2	..	2
Jam	3	2	1
Lard	2	2	..
Malt Vinegar	1	1	..
Margarine	8	8	..
Milk—New	17	10	7
„ Skim	4	3	1
„ „ (Condensed) ...	3	3	..
Paregoric	2	2	..
Potted Meats	4	1	3
Rice	3	1	2
Sausages	5	4	1
	85	65	20

(b) OFFICIAL SAMPLES.

Nature of Sample.	Total Number.	Number Genuine.	Number not Genuine.
Cream	5	3	2
„ (preserved)	5	3	2
Dripping	2	...	2
Milk (New)	134	120	14
„ (Skim)	3	3	...
Vinegar	5	4	1
	154	133	21

(c) ALL SAMPLES.

	Total Number.	Number Genuine.	Number not Genuine.
Informal Samples	85	65	20
Official Samples	154	133	21
Total	239	198	41

The percentage of samples presumed not to be genuine was 17.2—of official samples 13.6, and of informal samples 23.5. The corresponding figures for 1912 were 19.3, 15.76, and 26.2.

TABLE 64.—NORTHAMPTON, 1903-1913

FOOD AND DRUGS. PROPORTION PER CENT OF SAMPLES FOUND TO BE NOT GENUINE EACH YEAR SINCE 1903.

1903	1904	1905	1906	1907	1908	1909	1910	1911	1912	Ann. Average 1903-1912 (10 years).	1913
10.1	15.4	10.7	12.9	13.3	10.2	13.5	13.9	16.4	19.3	13.6	17.2

It will be seen that the figure for 1913 is over 25 per cent. in excess of the annual average for the preceding ten years, although it has dropped below the corresponding figure for 1912

TABLE 65 NORTHAMPTON, 1913.

FOOD AND DRUGS ACTS. INFORMAL SAMPLES NOT REPORTED GENUINE.

LIST SHEWING RESULT OF ANALYSIS IN EACH CASE.

NO.	NATURE OF SAMPLE.	RESULT OF ANALYSIS.
108	Cream	Contained 0.99% Boracic Acid
112	„	„ 0.33% „
109	„	„ 0.11% „
164	Dripping	„ 16.0% Water
165	„	„ 9.4% „
176	Milk, New	„ 11.5% added Water
177	„ „	Deficient in fat 14.3%
84	„ „	„ „ 14.0%
102	„ „	„ „ 13.0%
163	„ „	„ „ 11.7%
175	„ „	„ „ 6.7%
98	„ „	„ „ 1.3%
149	„ Skim	Contained 1.6% added Water
142	Potted Beef	„ 22.05 gr. Boracic „ Acid per lb.
143	„ „	„ 2.17 gr. „ „
124	„ Chicken and Tongue ...	„ 1.52 gr. „ „
34	Rice	„ 0.41% extraneous „ mineral matter
37	„	„ 0.40% „ „
220	Sausages	„ 10.9 gr. Boracic Acid per lb.
212	Strawberry Jam	„ 10% Gooseberry pulp

TABLE 66.

FOOD AND DRUGS ACTS. ADMINISTRATIVE ACTION TAKEN WITH REGARD

Name of Article.	Identi- fication Number given to the sample in the Quarterly Report.	RESULT OF ANALYSIS	Results of Legal Proceedings.					
			(a) Under Sale of Food and Drugs Acts.			(b) Under other Acts.		
			Fine. £ s. d.	Costs. £ s. d.		Fine. £ s. d.	Costs. £ s. d.	
Cream	115	Contained 0.75% Boracic Acid						
Cream	116	Contained 0.11% Boracic Acid						
Dripping ...	191	Contained 15.2% Water	0 7 6	0 12 6				
New " Milk ...	192	" 1.4						
	196	Contained 24.7% added Water	0 3 6	0 11 6				
" ...	238	Contained 5.0 %added Water						
" ...	113	Deficient in fat, 37.0%						
" ...	79	" " 21.7%	1 7 0	0 13 0				
" ...	93	" " 15.0%	0 15 0					
" ...	21	" " 10.0%						
" ...	228	" " 8.3%						
" ...	24	" " 8.0%						
" ...	77	" " 8.0%		0 7 6				
" ...	103	" " 3.3%						
" ...	107	" " 1.7%						
" ...	146	" " 1.2%						
" ...	63	" " 1.0%						
" ...	92	" " 9.3%		0 7 6				
Preserved Cream	120	Contained 0.71% Boracic Acid						
Preserved Cream	119	Contained 0.60 Boracic Acid						
Vinegar	202	Contained 0.5% added Water						

No Offences detected other than the above under any of the Food and Drugs Acts or other allied Acts.

TO OFFICIAL SAMPLES NOT REPORTED TO BE GENUINE DURING 1913.

If no legal proceedings were instituted, the course adopted in regard to each sample.	Information (if any) as to previous conviction.	Remarks on any point of special interest.
Warned by letter		
" "	{ 1910—New Milk, 7% deficient in fat. Dismissed on payment of costs, 11/-.	{ Informal sample previously obtained showed 16% water.
Warned by letter		{ Smallness of fine perhaps due to the fact that a second summons had to be served as there was a flaw in the previous service and defendant said he was prejudiced thereby.
Warned by letter		{ Considered a small offence by Committee in view of fact of no previous conviction.
		{ Summons withdrawn. It was pleaded that milk was abnormal due to condition of animal.
	{ 1912—Milk deficient in fat 13%. Fined £2, including costs.	{ 1909—Milk deficient in fat 3.7%. Warned.
Warned by letter		{ Committee considered
" "		{ First Offence { offence small
" "		{ in view of no previous default.
Warned by letter	{ 1909—Milk deficient in fat 9%. Fined £2 inclusive	{ Dismissed on payment of costs.
" "		{ 1909—Milk deficient in fat 1.7%. Warned by letter.
" "		{ 1909.—Milk deficient in fat 3.7%. Warned.
" "		{ Dismissed on payment of costs.
Warned by letter		{ Considered by Committee a small offence in view of no previous default.
" "		
" "		

TABLE 67. NORTHAMPTON, 1909-1913.

FOOD AND DRUGS ACTS. PROPORTION OF SAMPLES OF NEW MILK COMPARED WITH THOSE OF ALL FOODS AND DRUGS ANALYSED AND FOUND NOT GENUINE DURING THE LAST FOUR YEARS.

	1909	1910	1911	1912	1913	5 years 1909-13
Number of " All Samples " ...	245	251	250	249	239	1234
Proportion per cent of " All Samples " found not genuine	13.5	13.9	16.4	19.3	17.2	15.7
Proportion of " New Milk " Samples " per cent of " All Samples " taken	58.4	69.3	70.4	70.7	63.2	66.4
Proportion per cent, of " New Milk Samples " found not genuine	18.9	16.1	20.45	17.04	13.9	17.3
Proportion of " New Milk Samples " found not genuine per cent. of " All Samples " not genuine	81.8	80.0	87.8	62.5	51.2	72.7

It is some little satisfaction to note from the comparison with the figures of the last five years that the proportion of new milk samples found not genuine is distinctly improved, and I shall again reiterate my opinion that the quality of the milk in this Town appears to me to suffer more from careless handling than from deliberate sophistication. Unfortunately, the result to the consumer is equally risky, while the consequences to the vendor are much lighter.

I have to endorse all I have said in my previous reports on this matter. It is still a fact that nearly a seventh of all the milk samples taken were found to be presumably not genuine, *i.e.*, one out of every seven samples.

TABLE 68. NORTHAMPTON, 1909-1913.

FOOD AND DRUGS ACTS. AVERAGE COMPOSITION PER CENT. OF SAMPLES OF GENUINE NEW MILK TAKEN
BY THE INSPECTORS AND REPORTED ON BY THE PUBLIC ANALYST DURING THE FIVE YEARS 1909-1913,
EACH QUARTER.

Quarters of the Year.	1909			1910			1911			1912			1913			FIVE YEARS 1909-13		
	Average Composition.		Number of Samples.	Average Composition.		Number of Samples.	Average Composition.		Number of Samples.	Average Composition.		Number of Samples.	Average Composition.		Number of Samples.	Average Composition.		Number of Samples.
	Fat.	Solids not Fat.		Fat.	Solids not Fat.		Fat.	Solids not Fat.		Fat.	Solids not Fat.		Fat.	Solids not Fat.		Fat.	Solids not Fat.	
First ...	3.38	9.06	26	3.50	8.97	32	3.59	8.97	40	3.81	8.88	37	3.83	8.98	171	3.62	8.97	171
Second	3.54	8.88	30	3.49	8.95	34	3.64	8.86	30	3.59	8.87	21	3.55	8.93	143	3.56	8.90	143
Third...	3.74	8.90	24	3.69	8.81	36	3.51	8.69	29	3.64	8.71	35	3.56	8.87	152	3.63	8.80	152
Fourth	3.82	9.04	36	3.71	9.00	43	3.66	8.88	41	3.76	8.97	53	3.78	8.96	211	3.75	8.97	211
Year ...	3.63	8.97	116	3.61	8.94	145	3.60	8.86	140	3.62	8.59	146	3.69	8.94	677	3.64	8.91	677

In the report of the Local Government Board on the Sale of Food and Drugs Acts for 1912, which is the last available, information is supplied with regard to the adulteration of milk and cream in the Country generally, and in certain parts, and from such I have calculated the following :—

Percentage of Milk samples not genuine in 1912.						
England and Wales	...	...	...	...	...	11
London	...	...	...	...	...	9
18 largest Provincial Towns	...	...	..	...		9
Remainder of the Country	...	...	...	...		12
Northampton	...	...	...	...	...	14

I should here like to draw attention to Table 68, which gives the average composition per cent. of samples of genuine new milk taken during the five years 1909–1913. This shows that there is apparently little difficulty in keeping above the standard officially suggested as the minimum below which no genuine milk should fall as regards the proportion of its solid constituents—3 per cent. of fat, and 8.5 per cent. of solids not fat.

PRESERVATIVES IN FOOD. A list of the preservatives found on analysis of the food samples submitted is given in Table 69. It is satisfactory to note that in none of the samples of milk submitted was any trace of preservative found, and in most instances where preservative was added to food it was found in quantities which were not likely to be directly harmful. In most cases I am of opinion that the addition of preservative is unnecessary, and one of the chief objections to the use of such substances is that they are often used to prevent the detection of unsound or inferior food, or to mask or delay commencing decomposition, so that the purchaser is deceived. Sound food sold in a fresh state or kept under conditions of strict cleanliness should very seldom require preservative, and when such is added its presence and approximate proportion should be distinctly declared.

TABLE 69. NORTHAMPTON, 1913.
FOOD AND DRUGS ACTS. PRESERVATIVES IN FOOD. LIST OF ARTICLES
ANALYSED IN WHICH THE PRESENCE OF PRESERVATIVES WAS DETECTED
ACCORDING TO REPORTS OF PUBLIC ANALYST.

No. of Sample.	Month in which sample procured.	Nature of Sample.	Preservative Found.
211	November...	Butter	Boracic Acid—traces (Informal)
9	January ...	„ ...	„ „ 0.1% „
210	November...	„ ...	„ „ 0.2% „
108	June	Cream	„ „ 0.99% „
115	July	„	„ „ 0.75%
112	June	„	„ „ 0.33% (Informal)
109	„	„	„ „ 0.11% „
116	July	„	„ „ 0.11%
120	„	Cream Preserved	„ „ 0.71%
119	„	„ „	„ „ 0.60%
114	„	„ „	„ „ 0.53%
138	August	„ „	„ „ 0.50% (Informal)
130	„	„ „	„ „ 0.46%
137	„	„ „	„ „ 0.04%
11	January ...	Margarine	„ „ 0.3% (Informal)
230	December	„	„ „ 0.2% „
231	„	„	„ „ 0.2% „
232	„	„	„ „ 0.2% „
233	„	„	„ „ 0.2% „
234	„	„	„ „ 0.2% „
10	January ...	„	„ „ 0.1% „
12	„ ...	„	„ „ 0.1% „
142	August	Potted Beef	„ „ 22.05 gr. per lb. (Informal)
143	„	„ „	„ „ 2.17 „ „ „ „
124	July	Potted Chicken & Tongue	„ „ 1.52 „ „ „ „
220	December	Sausages ...	„ „ 10.9 „ „ „ „
222	„ ...	„ ..	„ „ traces (Informal)
223	„ ...	„ ...	„ „ „ „
224	„ ...	„ ..	„ „ „ „

The names of 245 Milksellers and 29 Cowkeepers were on the register at the end of 1913. As in previous years, the premises were inspected from time to time by the inspectors, and on occasion by myself. The Inspectors' visits numbered 264, and defects were reported in 18 cases. It is somewhat difficult to keep an accurate register of milksellers, as many of these individuals are constantly changing. There was no great fault to find in general with the cleanliness of the premises and of the vessels used, and when such fault was detected it was quickly remedied.

There is still much improvement to be desired in the construction, lighting, and ventilation of many of the cowsheds, though the animals inspected generally seemed to be healthy. It requires, however, very careful supervision, especially during the hot weather to maintain a proper hygienic standard in connection with those premises.

PUBLIC HEALTH (MILK AND CREAM) REGULATIONS, 1912.

The Regulations, made by the Local Government Board under powers conferred by the Public Health (Regulations as to Food) Act, 1907, came into force on October 1st, 1912, with the exception of sub-division (1) of Article V., which did not become operative till January 1st, 1913. The Regulations prohibit the addition of preservative substances to milk, or to cream containing less than 35 per cent by weight of milk-fat, and places certain restrictions on the addition of preservatives to cream containing 35 per cent. of milk-fat. These restrictions are for the purpose of differentiating between preserved cream and cream to which no preservative has been added. The Regulations also prohibit the addition of any thickening substance to cream or preserved cream. They only apply to milk, cream, and preserved cream, which are intended for sale for human consumption. On each Local Authority the duty is thrown of seeing that the Regulations are carried out in the district, and samples are required to be taken, under the supervision of the Medical Officer of Health, and submitted for analysis, and if breaches of the Regulations are detected certain action must be taken.

The Local Government Board in a circular letter dated October 27th, 1913, recommend a form of report which will secure both completeness and uniformity of statement of the work carried out by each Local Authority. The following statement is made in accordance with suggestions of the Board.

PUBLIC HEALTH (MILK AND CREAM) REGULATIONS, 1912.

REPORT FOR THE STATISTICAL YEAR ENDED JANUARY, 3RD, 1914

1.—Milk and Cream not sold as Preserved Cream.

	(a) Number of samples examined for the presence of a preserv- ative.	(b) Number in which preserv- ative was reported as present.
MILK ...	See 4 (below)	...
CREAM...	9 (5 of which were taken in- formally for information).	5 (3 of which were informal)

Note to (b). The preservative in each was Boracic Acid :—

No. 108 (Informal) Boric Acid 0.99%. Official Sample subsequently taken. (See No. 115 below).

No. 109 (Informal) Boric Acid 0.11%. Tried to get official sample later, but always found that milkman was not then selling cream.

No. 112 (Informal) Boric Acid 0.33%. Official Sample taken subsequently. (No. 114).

No. 115 (Official) Boric Acid 0.75%. Interviewed by Public Health Committee and explained that his labels, which had been ordered, had not arrived. Censured and warned by letter from Town Clerk.

No. 116 (Official) contained Boric Acid 0.11%. Interviewed by Public Health Committee. Explained he had bought the Cream from wholesale dealer, and his employe had neglected to label the vessel. Censured and warned by letter from Town Clerk.

2.—Cream sold as Preserved Cream.

(a) Instances in which samples have been submitted for analysis to ascertain if statements on the label as to preservatives were correct.

(i) Correct Statements made	0
(ii) Incorrect Statements made	3
	—
Total	3
	—

(b) Determinations made of milk-fat in cream sold as preserved cream.

(i) Above 35 per cent.....	3
(ii) Below 35 per cent.	0
	—
Total	3
	—

(c) Instances where (apart from analysis) the requirements as to labelling or declaration of preserved cream in Article V (i) and the proviso in Article V. (2) of the Regulations have not been observed.....3

(d) Particulars in each case in which the Regulations have not been complied with, and action taken :—

No. 114. Preserved Cream. Label stated “Contains Boracic Acid not exceeding 0.5%” Analyst found .53%. Sampling officer omitted by mistake to give Analyst particulars of label, and hence this was returned as “genuine.”

No. 119. Preserved Cream. Labelled as in No. 114. Found to contain 0.60 % Boracic Acid. Vendor appeared before Public Health Committee, but had no excuse to offer. Censured by Committee. Warning Letter from Town Clerk.

No. 120. Preserved Cream. Labelled as in No. 114. Found to contain 0.71% Boracic Acid Vendor explained to Committee that he purchased the Cream from a Dairy in Somerset, which had already affixed the label. Warned by letter from Town Clerk on behalf of Committee.

3.—Thickening Substance :—No evidence of their addition to Cream or to Preserved Cream.

4.—Other Observations :—The Milkmen on the Register were circularised when the Regulations came into force, and their attention called to their obligations.

151 Samples of Milk were analysed in accordance with the procedure under the Sale of Food and Drugs Acts, and in no case was added preservative found.

SLAUGHTER HOUSES AND FOOD INSPECTION. There were 66 private slaughter houses on the Register at the end of 1913, and 1,617 visits to these premises were recorded by the Inspectors. In 1912, 808 similar visits were paid ; in 1911, 804 ; in 1910, 345 ; and in 1909, 203. It will be noted, therefore, that this part of the work has been increasing year by year. A double purpose is served by these visits, the main one being to examine the meat during the process of slaughter in order to see that it is fit for food, and at the same time to inspect the premises for possible sanitary defects, or infringements of the bye-laws. In 16 instances such defects or infringements were discovered, and in each case promptly dealt with.

In addition to these visits to slaughter houses, 337 visits were made to other premises where food is manufactured or stored, and defects were found to exist at only one.

Again I must point out that the inspection of meat during the process of slaughter requires very considerable time, and it is found necessary for each Inspector to give up at least one whole afternoon in the week to this work—that of course on which the most slaughtering takes place.

As, however, all the slaughtering does not take place on one afternoon, frequent special visits at other times are required, and it will be readily seen that much of the time of the staff is occupied in this way which has to be taken from other duties. For this reason I have for some time strongly urged the appointment of a special Foods' Inspector, whose duty it shall be to devote most, if not all, of his time to the inspection of food, both under the Public

Health Acts and the Food and Drugs Acts, with as much assistance and co-operation as can be obtained from the other Inspectors without serious interference with their other duties.

I am glad to have to state that the Council has at length acted on my suggestion, and in the middle of the year under present consideration, a special Foods' Inspector was appointed. The work of slaughter house and food inspection has, however, not been taken out of the hands of the district Inspectors, but still each in his own district carry out a considerable portion of this work. The work of the Foods' Inspector is in addition to that of the district Inspectors, both under the Public Health and the Food and Drugs' Acts, and the various regulations made in connection with these, dealing with this matter.

The results of these increased efforts on the part of the Department amply justify, in my opinion, the course adopted by the Council, as the Tables which follow, showing the amount of unsound food dealt with during the year, will demonstrate.

TABLE 70. NORTHAMPTON, 1913.

UN SOUND FOOD SEIZED DURING THE YEAR, CONDEMNED BY MAGISTRATES
AND DESTROYED.

NO.	NATURE OF FOOD.	WEIGHT.			PLACE OF SEIZURE.	REMARKS.
		cwt.	qrs.	lbs.		
1	Quantity of Beef	1	2	1	Butcher's Shop	Fined £5
2	3 Portions of a Beef Carcase	2	0	17	Butcher's Shop	Fined £15
3	Beef Liver .....	...	...	15	Butcher's Shop	No Prosecution Owner warned
	Total	3	3	5		

TABLE 71. NORTHAMPTON, 1913.

UN SOUND FOOD VOLUNTARILY SURRENDERED AND DESTROYED

NATURE OF FOOD.	WEIGHT.			
	TONS.	CWTS.	QRS.	LBS.
Beef	8	6	2	7
Pork	1	11	1	14
Mutton .....	...	18	0	7
Veal .....	...	1	2	8
Offal .....	...	11	2	7
Fish.....	...	7	...	2
Poultry and Game.....	...	...	3	24
Tinned Fruits .....	...	...	...	6
Total	11	17	0	19

TABLE 72. NORTHAMPTON, 1913.

UN SOUND FOOD. TOTAL QUANTITY DEALT WITH BY THE DEPARTMENT
DURING THE YEAR.

METHOD OF OBTAINING POSSESSION	WEIGHT.			
	TONS.	CWTS.	QRS.	LBS.
3 Seizures.....	...	3	3	5
144 Occasions unsound food surrendered during Routine Inspection	3	13	1	18
105 Requests from Owners	8	3	3	1
Total	12	0	3	24

TABLE 73.—NORTHAMPTON, 1902-1913.
UN SOUND FOOD. AMOUNT DEALT WITH BY THE DEPARTMENT IN EACH
YEAR SINCE 1902.

YEAR.	WEIGHT.			
	TONS.	CWTS.	QRS.	LBS.
1902.....	1	4	—	11
1903.....	2	18	2	13
1904.....	—	19	3	8
1905.....	—	5	2	22½
1906.....	—	8	3	10
1907.....	1	7	—	14
1908.....	1	—	3	—
1909.....	1	17	1	6
1910.....	6	13	2	4½
1911.....	8	12	—	14½
1912.....	6	—	2	17½
1913.....	12	—	3	24
Total	43	9	2	5

Many of the slaughter-houses were registered at the time of the passing of the Public Health Act, 1875, having been in use previously, and this registration cannot be annulled as long as their continued use as slaughter-houses is maintained. Most of the others were licenced after the 1875 Act came into force, but before the adoption of the Public Health Acts (Amendment Act) 1890, (Part III.), and their licence cannot be revoked except after two convictions of the occupier under certain sections of the Public Health Acts. The remainder (five in number), have been licenced since the adoption of the Amendment Act, and their licences only extend for a year and have to be renewed each January. These last are the only premises in connection with which adequate power to maintain proper sanitary safeguards exists.

So far as our inspection has shown there has been no particular reason to complain against the management of these slaughter-houses, and the bye-laws, in so far as they can be made to apply to the existing premises, have been fairly well adhered to, but the very situation and construction of most of them makes our system of private slaughter-houses inconsistent with true sanitary progress.

Again I have to acknowledge the co-operation on the part of the butchers especially those who are members of the Butchers' Association, in maintaining a sound meat supply. It has been customary for some time back for the butchers, when they suspected that the meat is unsound, to consult the Foods' Inspector, and if in his opinion the meat is unfit for human food it is usually surrendered without any trouble. In the absence of any compensation at the public expense, a large number of butchers in Northampton and County have maintained a compensation fund into which each pays a regular sum, and from which he is compensated in the event of the meat being surrendered to the Department as unfit for food. The existence of this fund has been of very great help in securing to the public a sound meat supply, and it is to be hoped that all the butchers in the Town will support this scheme.

It is a significant fact that out of the 12 tons of unsound food destroyed during the year, less than 4 cwts. were seized, and that there were only three seizures while nearly 250 surrenders were made.

The services of the Special Foods' Inspector were largely utilised in watching the food in the markets, though fortunately only a comparatively small amount of unsound food required to be dealt with there.

The inspection of all animals entering the Cattle Market is made by the Corporation Veterinary Inspector, and any suspicious animals are not permitted to be brought in but are sent back to the Owners. Five animals, however, during the year were brought to the market in a nearly moribund condition. These were slaughtered at the Market, found unfit for food, and consequently destroyed.

BAKEHOUSES. During the year 1913 there were 112 bakehouses under supervision. The Inspectors in their routine duties visited each of these premises, where necessary several times, and reported on any insanitary conditions found. In this way 179 visits were made, and sanitary defects were found on 54 occasions. These defects were remedied promptly when pointed out.

INSANITARY DWELLINGS. The work done in connection with insanitary dwellings, mostly under section 17 of the Housing, Town Planning, etc., Act, 1909, continued during the year, although largely concerned with dealing with arrears left undealt with in previous years.

TABLE 74. NORTHAMPTON, 1913.

HOUSING, TOWN PLANNING, ETC. ACT, (1909). HOUSES REPRESENTED BY THE MEDICAL OFFICER OF HEALTH PREVIOUS TO 1913, BUT NOT FINALLY DEALT WITH BEFORE THIS YEAR BEGAN. ACTION TAKEN DURING 1913 AND CONDITION UP TILL THE END OF THE YEAR.

HOUSES.	Date of			Remarks (Condition up till end of 1913)
	Representa- tion.	Closing Orders.	Demolition Orders.	
Augustine Street, 36	20-11-12	10-2-13	6-10-13	Operation suspended 1-12-13, to enable Owner to carry out renovation.
Bath Gardens, 1, 2, 3, 4, 5 and 6	15-5-12	31-7-12	10-2-13	Converted into 4 houses —renovated. Orders revoked, 7-7-13.
Bridge Street, 103 ...	14-12-10	21-3-11	...	Purchased by Corpor- ation for Street Widen- ing. Not yet demolished
Bridge Street, Court 1. 3, 4, 5, 6, 7, 8, 9, 10, 11 and 12	24-7-12	...	...	Purchased by Corpor- ation for Street Im- provement. Nothing further done—some still occupied.
Chalk Gardens, 1, 2, 3, 4, 5 and 6	30-10-12	7-4-13	...	Houses demolished and land purchased by Corporation for re- housing scheme, with- out demolition orders.
Chalk Lane, 14, 15, 16, 17 and 18	30-10-12	7-4-13	...	Ditto
Crispin Street, 17 ...	30-10-12	10-2-13	6-10-13	Demolished in begin- ning of 1914 by Boro' Engineer.
Crispin Street, 33, 35, 37, 39, 41, 43 & 45	24-7-12	11-11-12	2-6-13	Demolished by Boro' Engineer.
Doddridge Street, Court II., 1, 2, 3, 3, 4, 5, 6, 7, and 8	25-9-12	2-12-12	7-7-13	Still standing empty, but closed. Demolished by Owner in beginning of 1914.

TABLE 74—*Continued.*

HOUSES.	Date of			Remarks (Condition up till end of 1913).
	Representa- tion.	Closing Orders.	Demolition Orders.	
Fetter Street, 17 and 19	25-9-12	2-12-12	7-7-13	Demolished by Owner
Foundry Street, Court II., 1 and 2	25-9-12	2-12-12	7-7-13	„ „
Foundry Street, Court III., 1, 2, 3 and 4	25-9-12	2-12-12	7-7-13	„ „
Francis Street, 2, 4, 6, 8, 10, and 12	24-1-12	1-4-12	...	Orders revoked. Houses renovated.
Francis Street, 14, 16 and 18	25-1-11	3-4-11	3-6-12	Local Government Board confirmed Orders in July. Houses repaired and Orders revoked by the end of the year.
Freeschool Street, 28	25-9-12	2-12-12	7-7-13	Still standing empty and closed.
Gas Street, 29 ...	25-5-10	3-6-12	2-12-12	Demolished.
Gladstone Terrace, 43	11-12-12	7-4-13	...	Still empty and closed.
Gladstone Terrace, 59, 61, 63, 65, 67, 69 and 71	22-11-11	5-2-12	...	Houses renovated. Orders revoked.
Gladstone Terrace, 60 and 62	11-12-12	...	...	Renovated by Owner without Closing Order (25-6-13). No further action taken.
Gladstone Terrace, 66	22-11-11	5-2-12	7-10-12	Renovated. Order revoked.
Gladstone Terrace, 68 and 70	22-11-11	5-2-12	...	Renovated. Order revoked.
Grafton Street, 22, and Kinburn Place, 1, 3, 5, 7, 9, 11, 13, 15, 17, 19, 21, 23, 25, and 27	24-7-12	...	...	Owner repaired this property sufficiently to make it habitable and no Order was made (7-4-13).
Grafton Street, Court I., 1, 2, 3, and 4	25-9-12	2-12-12	...	Demolished by Owner without further Orders

TABLE 74—Continued.

HOUSES.	Date of			Remarks (Condition up till end of 1913).
	Representa- tion.	Closing Orders.	Demolition Orders.	
Green Street, 59 ...	23-2-12	1-4-12	3-3-13	Operation postponed (7-4-13). Borough Engineer to demolish. Not yet demolished. Subsequently demolished in beginning of 1914.
Gregory Street, 19, 21 and 23	21-2-12	11-3-12	...	Making of Demolition Order. Not proceeded with. Owner allowed to deposit plans for turning houses into warehouses. Plans approved (2-6-13) and conversion carried out
Gregory Street, Gregory Cottages, 1 & 2	24-1-12	11-3-12	7-10-12	Demolished by Owner in 1913.
Horsemarket, Court II., 1, 2, 3, 4, 5, 6. & 7	18-10-11	5-2-12	7-10-12	Demolished by Owner in 1913.
Horseshoe Street, 3	25-9-12	2-12-12	7-7-13	Not yet demolished.
Horseshoe Street, 22, 24 and 26	11-12-12	3-3-13	...	Consideration of making Demolition Orders postponed. Owner proposes conversion in garage and stores.
Narrow Toe Lane, 6 & 7	25-9-12	2-12-12	7-7-13	Demolished by Owner.
Narrow Toe Lane, 8 and 9	25-9-12	2-12-12	7-7-13	Still standing closed. Subsequently demolished by Owner in 1914
Regent Square, Court I., 2, 3 and 4	25-9-12	2-12-12	7-7-13	Demolished by Owner.
St. Edmunds Road, Volunteer Cottages, 1 & 2	11-12-12	...	...	„ „
St. George's Square, 25, 26, 27, and 28	20-3-12	6-5-12	2-12-12	„ „
St. George's Square, 29	20-3-12	6-5-12	2-12-12	„ „

TABLE 74—*Continued.*

HOUSES.	Date of			Remarks (Conditions up to end of 1913).
	Representa- tion.	Closing Orders.	Demolition Orders.	
St. James' Square, 1, 2 and 3	25-9-12	2-12-12	...	Consideration of Demolition Orders postponed. Owner converted premises into a warehouse. No further action to be taken.
St. Mary's Street, 4 & 6	30 10-12	10-2-13	...	Demolition Order in 1914
St. Mary's Street, 46 and 48	14-12-10	3-4-11	5-2-12	Demolished by Boro' Engineer.
St. Peter's Street, 13	24-1-12	11-3-12	7-10-12	Demolished by Owner.
Scarletwell Street, 77 and 79	15-5-12	31-7-12	...	Demolished by Owner, without order.
Spring Lane Terrace, 2, 4, 6, 8, 10, 12, 14, 16 and 18	24-7-12	11-11-12	...	Demolition Order postponed several times, owing to negotiations for sale. New Owner in process of renovating.
Swan Street, 5 ..	23-2-10	4-4-10	...	Consideration of Demolition Orders postponed for 12 months. Still standing closed, part used as coal store for neighbouring bakehouse
Union Street, Union Court, 1, 2 and 3	11-12-12	3-3-13	...	House demolished by Owner without further Order.
Upper Mounts, Court V., 1, 2 and 3	25-9-12	10-2-13	...	...
Wellingborough Road, Brier Court, 3 houses	25-9-12	2-12-12	7-7-13	Demolished by Owner
Weston Place, 1, 3, 5 and 7	15-5-12	31-7-12	...	Order revoked. Houses renovated.
Weston Street, 8, 10, and 12	30-10-12	10-2-13	...	Consideration of making Demolition Order adjourned as Owner proposed reconstruction. Partly demolished and converted into Garage Resolved—No further action.

TABLE 75. NORTHAMPTON, 1913.

HOUSING, TOWN PLANNING, ETC., ACT (1909). HOUSES REPRESENTED BY MEDICAL OFFICER OF HEALTH AND CLOSED BY COUNCIL DURING THE YEAR. SUBSEQUENT CONDITION UP TILL END OF THE YEAR.

HOUSES.	DATE OF		RESULT (CONDITION UP TILL END OF 1913).
	REPRES- ENTATION.	CLOSING ORDERS.	
King Street, Court I., 1 and 2	19-3-13	2-6-13	Closed. Considera- tion of making Demo- lition Order postponed
St. George's Square, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, and 23 (17 houses)	19-3-13	2-6-13	Closed and demolished before end of year by owners.

TABLE 76. NORTHAMPTON, 1913.

HOUSING, TOWN PLANNING, ETC., ACT (1909). HOUSES REPRESENTED BY MEDICAL OFFICER OF HEALTH DURING 1913, BUT NOT CLOSED. SUBSEQUENT ACTION AND CONDITION UP TILL THE END OF THE YEAR.

HOUSES.	DATE OF REPRES- ENTATION.	ACTION TAKEN AND RESULT (CONDITION AT END OF 1913).
Green Street, 57	22-1-13	No Order made. Notice under Public Health Act served on Owner. Notice not complied with. Owner closed house. Now standing closed.

TABLE 77. NORTHAMPTON, 1913.

HOUSING, TOWN PLANNING ETC., ACT (1909). HOUSES REPRESENTED BY MEDICAL OFFICER OF HEALTH DURING 1913, BUT REMAINING TO BE DEALT WITH IN THE BEGINNING OF 1914.

HOUSES.	DATE OF REPRESENTATION.	REMARKS.
Bath Street, Court III., 1, 2, 3 and 4	22-10-13	Closing Orders in 1914 (February).

In 33 of the houses in the district in which evidences of the overcrowding of the occupants were found, steps were taken as a result of which the conditions were remedied.

HOUSE TO HOUSE INSPECTION. The following table gives some idea of the extent of the systematic House Inspection carried out by the Inspectors during the year. This work is done independently of complaints in order that the Inspector may acquaint himself with the general condition of his district, and in this way find out the existence of insanitary conditions which might not otherwise come to his notice.

TABLE 78. NORTHAMPTON, 1913.

HOUSE TO HOUSE INSPECTION.

STREET.	NO. OF HOUSES.	STREET.	NO. OF HOUSES.
Adnitt Place	14	Maycock's Row, Bridge Street...	10
Alliston Gardens.....	8	Melville Street	12
Alma Street	19	Oak Street	8
Althorp Street.....	8	Regent Street	5
Arthur Street	47	Roe Road	68
Augustine Street.....	17	St. Andrew's Place	6
Bath Row	3	Salisbury Street	35
Bath Street (Court 3)	4	Scarletwell Street	9
Belton Place	6	Scarletwell Street (Court 4)	4
Campbell Street	4	Semilong Place	11
Chapel Place	19	Semilong Road (South)	12

TABLE 78.—Continued.

STREET.	NO. OF HOUSES.	STREET.	NO. OF HOUSES.
Commercial Street	13	Spencer Road	10
Compton Street	11	Spencer Street	14
East Street	14	Upper Mounts (Court 4)	3
Garfield Street	9	Wellingborough Road	10
Gas Street	8	Weston Place	5
Gladstone Terrace	33	Weston Row	7
Grenville Terrace	7	West Street	8
Hester Street (Lower)	7	Whitworth Road	6
Horsemarket	2		—
Kettering Gardens	6	Total	513
Kinburn Place	11		—

COMMON LODGING HOUSES. There were five common lodging houses on the register. They continued to be fairly well conducted, and on the whole were found to be in a reasonably clean condition. An application was made at the end of 1912 for the registration of a common lodging house in Horsemarket. This was refused at first, until the owner had complied with certain conditions suggested by this department and by the Borough Engineer. As usual a routine weekly visit was paid throughout the year, the day and hour of visitation varying and being unknown to the keepers. Certain minor defects which were found at different times were in each case remedied immediately.

CANAL BOATS. The following is a synopsis of the Canal Boats Inspector's report, presented as required by the Acts to the Public Health Committee, in January, and at the same time to the Local Government Board. Inspector Walker continued to act as Canal Boats Inspector during the year.

128 boats were inspected during the year, registered to carry 418 adults and 29 children. The actual numbers carried were 139 men, 94 women, and 150 children—260 persons in all, and equal to 308 adults.

One boat required repairing and painting, and in another the cabin needed repairs. These requirements were carried out. No legal proceedings were taken. No cases of infectious disease were noted, and there was no

TABLE 80. NORTHAMPTON, 1913.

Annual Report of the Medical Officer of Health for the Year, 1913

FOR THE

County Borough of Northampton.

On the Administration of the FACTORY & WORKSHOP ACT, 1901, in connection with

Factories, Workshops, Workplaces, and Homework.

1.—INSPECTION.

Including Inspections made by Sanitary Inspectors or Inspectors of Nuisances

Premises. (1)	Number of		
	Inspections. (2)	Written Notices. (3)	Prosecutions (4)
Factories... (Including Factory Laundries)	4	1	..
Workshops (Including Workshop Laundries)	322	40	..
Workplaces (Other than Outworkers' premises)	1	1	..
Outworkers' Premises ...	219	38	..
Total	546	80	..

2.—DEFECTS FOUND.

99a

Particulars.	Number of Defects.			Number of Prosecutions.
	Found.	Remedied	Referred to H.M. Inspector.	
(1)	(2)	(3)	(4)	(5)
<i>Nuisances under the Public Health Acts :—*</i>				
Want of Cleanliness	55	55	...	...
Want of Ventilation ... ..	...	...	...	...
Overcrowding	5	5	...	...
Want of Drainage of Floors ... ..	...	...	...	...
Other Nuisances	65	65	...	...
Sanitary accommodation {	insufficient	6	6	...
	unsuitable or defective	13	13	...
	not separate for sexes... ..	2	2	...
<i>Offences under the Factory and Workshop Act :—</i>				
Illegal occupation of underground bakehouse (s 101)	...	...	...	...
Breach of special sanitary requirements for bake-houses (ss. 97 to 100)	54	54	...	...
Other offences ... ..	.	..	...	...
(Excluding offences relating to outwork which are included in Part 3 of this Report)				
Total	200	200	...	...

* Including those specified in sections 2, 3, 7 and 8, of the Factory and Workshop Act, 1901, as remediable under the Public Health Acts.

3.—HOMEWORK.

NATURE OF WORK.	OUTWORKERS' LISTS, SECTION 107.									OUTWORK IN UNWHOLE-SOME PREMISES, SECTION 108.			OUTWORK IN INFECTED PREMISES, SECTIONS 109, 110.		
	Lists received from Employers.						Notices served on Occupiers as to keeping or sending lists.	Prosecutions.		Instances.	Notices served.	Prose-cutions.	Instances.	Orders made (S. 110)	Prose-cutions (Sections 109, 110).
	Sending twice in the year.			Sending once in the year.				Failing to keep or permit inspection of lists.	Failing to send lists.						
	Lists.	Outworkers.		Lists.	Outworkers.										
		Con-tractors.	Work-men.		Con-tractors.	Work-men.									
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
Wearing Apparel— (1) Making, &c. ...	62	34	337	65	13	566	98	...	...	...	...	...	13	...	...

Lace, Lace Curtains and Nets, Furniture and Upholstery, Fur Pulling, Umbrellas, Paper Bags and Boxes, Brush Making, Stuffed Toys, File Making, Electro Plate, Cables and Chains, Anchors and Grapnels, Cart Gear, Locks, Latches, and Keys.—No Outworkers in these Trades.

4.—REGISTERED WORKSHOPS.

5.—OTHER MATTERS.

Workshops on the Register (s. 131) at the end of the year. (1)	Number. (2)
Number of Workshops (including Bakehouses) on Register ...	440
Number of Outworkers' Premises on Register ...	368
Total Number of Workshops on Register ...	808

Class. (1)	Number (2)
<i>MATTERS NOTIFIED TO H.M. INSPECTOR OF FACTORIES :—</i>	
Failure to affix abstract of Factory and Workshop Act (s. 133) ...	4
Action taken in matters referred by H.M. Inspector as remediable under the Public Health Acts, but not under the Factory and Workshop Act (s. 5)	13
Other ...	12
Underground Bakehouses (s. 101)— Certificates granted during the year ...	...
In use at the end of the year ...	1

occasion for the detention of any boats. The number of boats on the register known to be in use is eight. There were no new registrations or re-registrations during the year.

PROSECUTIONS. The following is the list of legal proceedings taken by the Department during the year, in addition to those already mentioned under the Sale of Food and Drugs Acts, and the Food Inspection parts of the report.

TABLE 79. NORTHAMPTON, 1913.

RESULT OF LEGAL PROCEEDINGS FOR FAILURE TO COMPLY WITH NOTICES
UNDER THE PUBLIC HEALTH ACTS.

DATE.	COMPLAINT.	RESULT.
Jan. 22nd ...	Nuisance from over-crowded dwelling house in Castle Street	Order made for abatement within 14 days . Nuisance abated.
Jan. 29th ...	Nuisance from over-crowded house in Nelson Street	Order made for abatement within 3 weeks. Nuisance abated.
April 30th .	Repairs to house not carried out after Notice under Public Health Acts	Order made for work to be done within 14 days: Work carried out.
Aug. 13th and Sept. 8th.	Establishing an offensive trade in the town without permission of the Council (Section 112, Public Health Act, 1875).	Fined £10, inclusive of costs Trade abandoned.

FACTORY [AND WORKSHOP ACT, 1901. Table 80 shows the form in which the work done in connection with this Act must be sent to the Home Office each year.

There is still a considerable difficulty in obtaining lists of outworkers, which the Act requires to be sent twice during each year. Again and again has the attention of the employers been called to this omission, and it seems as if nothing short of prosecution in the case of some of the offending Firms will improve matters.

In the course of inspection any defects which were found were in most instances readily attended to.

Communications from H.M. Inspector of Factories have received in all cases due attention.

DRAIN TESTING. The following table gives the list of premises in which the smoke test was applied to the drainage system, with result of the test in each case:—

TABLE 81. NORTHAMPTON, 1913.
DRAIN-TESTING.

SITUATION OF PREMISES.	RESULT.				Total.
	Found Defective.	Not Found Defective.			
Abington Avenue, 84	1	...	0	...	1
Abington Street, 40	1	...	0	...	1
Albion Place, 15, 16, 17, 18	3	...	1	...	4
Althorp Street, 26, 28, 34, 36	4	...	0	...	4
Bath Street, 61	1	...	0	...	1
Bouverie Street, 33, 35	2	..	0	...	2
Bridge Street, 17, 31, 33	3	...	0	...	3
Brook Street, 17, 19, 21, 23	4	...	0	...	4
Brunswick Street, 43, 45	2	...	0	...	2
Castilian Street, 9	1	...	0	...	1
Castle Hill, 5	0	...	1	...	1
Clarence Avenue, 39, 86	2	...	0	...	2
Clare Terrace, 30, 32	2	...	0	...	2
Cloutsham Street, 27, 29	1	...	1	...	2
Colwyn Road, 10	1	.	0	...	1
Derngate (Eastgate College)	0	...	1	..	1
Freehold Street, 20	1	...	0	..	1
Freeschool Street, 4, 6	2	...	0	.	2
Gregory Street, 37, 39	2	...	0	...	2

TABLE 81.—*Continued.*

SITUATION OF PREMISES	RESULT.			
	Found Defective.		Not found Defective.	Total.
Gregory Terrace, 3	0	...	1	1
Grove Road, 47, 49	2	...	0	2
Harding Terrace, 35	1	...	0	1
Herbert Street, 21	1	...	0	1
Hester Street (Lower) 13, 15, 45, 47	4	...	0	4
Holly Road, 71	1	...	0	1
Ivy Road, 36, 38, 56	1	...	2	3
Kinburn Place, 6	1	...	0	1
Lawrence Street, 26, 53	1	...	1	2
Leicester Parade, 2, 3	2	...	0	2
Lorne Road, 61 ..	1	...	0	1
Louise Road, 25, 70, 72, 74	2	...	2	4
Marriott Street, 2	1	...	0	1
Oak Street, 2, 4, 6, 8, 10, 12, 14, 16	8	...	0	8
Perry Street, 11, 12, 13, 14	4	...	0	4
Portland Street, 47, 49, 51	3	...	0	3
Queen's Park Parade, "Rose Mount"	1	...	0	1
Queen Victoria Nurses' Institution	1	...	0	1
Regent Square, 7, 8, 9, 10	4	...	0	4
Roe Road, 27	0	...	1	1
St. Andrew's Road, 56	1	...	0	1
St. George's Avenue, 11, 24	2	...	0	2
St. George's Street, 1	1	...	0	1
St. James' Street, 13 ..	1	...	0	1
Semilong Place, 9, 14, 15, 16	4	...	0	4
Semilong Road (South), 3, 6, 7, 8, 11	5	...	0	5
Sunderland Street, 2	0	...	1	1
Victoria Place, 2.....	0	...	1	1
Victoria Road, 64, 66	1	...	1	2
Waterloo (Eastgate College)	0	...	1	1
Wellington Place, 2	1	...	0	1
Wellington Street, 46	0	...	1	1
Weston Place, 9, 11, 13	3	...	0	3
<hr/>				
	91		16	107
<hr/>				

TABLE 82. NORTHAMPTON, 1913.

DRAIN EXAMINATION UNDER SECTION 41, PUBLIC HEALTH ACT, 1875.

Number of House Drains examined—24.

SITUATION OF PREMISES.	RESULT OF EXAMINATION.	REMARKS.
Albion Place, 16	Defective	Partly re-constructed.
Bridge Street, 33	„	Reconstructed.
Earl Street, 57, 59	„	„
Poole Street, 52, 54, 56, 58, 60, 55, 57, 59, 61, 63	„	„
Portland Street, 49	„	„
Semilong Place, 9	„	„
Semilong Road, South, 3, 6, 7, 8	„	„
St. James' Street, 13	„	„
Wellington Place, 2, 2a	„	„
Weston Place, 9	„	„

RECONSTRUCTION OF DRAINS. The next table shows those premises in which the drainage system was so defective as to necessitate re-construction. This was carried out in most instances under the supervision of the Department :—

TABLE 83. NORTHAMPTON, 1913.

RECONSTRUCTION OF DRAINS.

SITUATION OF PREMISES.	NO. OF HOUSES.
Abington Avenue, 92, 94, 118, 120	4
Abington Street, 21	1
Althorp Street, 26, 28	2
Ash Street, 43, 45, 47	3
Bailiff Street, 11, 13	2
Bridge Street, 31, 33	2
Brook Street, 17, 19, 21, 23	4
Bouverie Street, 9, 11, 33, 35	4
Clarence Avenue, 39	1
Clare Terrace, 30	1

TABLE 83.—*Continued.*

SITUATION OF PREMISES.	NO. OF HOUSES.
Connaught Street, 21, 23, 25	3
Derngate, 41, 43	2
Earl Street, 53, 55, 57, 59, 61, 63, 65, 67	8
Ethel Street, 32, 34	2
Fitzroy Terrace, 12, 14, 16	3
Francis Street, 2, 4, 6, 8, 10, 12, 14, 16, 18	9
Freeschool Street, 4, 6	2
Gold Street, 54	1
Green Street, 104	1
Grove Road, 47, 49	2
Harding Street, 37	1
Hester Street, (Lower), 49, 51, 53, 55, 57, 59	6
Holly Road, 5	1
Kingswell Street, 14, 36, 38, 40 (Workshop rear of 36)	5
Kingswell Terrace, 1, 2, 3, 4, 5, 6, 7, 8, 9	9
Lorne Road, 59, 61	2
Louise Road, 72, 74	2
New Town Road, 20, 22, 24, 26, 25, 27	6
Oak Street, 2, 4, 6, 8, 10, 12, 14, 16	8
Perry Street, 11, 12	2
Poole Street, 50, 52, 54, 55, 56, 57, 58, 59, 60, 61, 63	11
Portland Street, 12, 14, 16, 18, 47, 49, 51	7
Regent Square, 9, 10	2
St. George's Avenue, 21	1
St. George's Square, 24	1
St. Giles' Street, 6.....	1
St. James' Street, 13, 15, 17	3
St. John's Street, 11, 13	2
Semilong Place, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20	12
Semilong Road (South), 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12	12
Sheep Street, 56, 56a, 56b	3
Spencer Street, 1	1
Swan Street, 76, 78, 80, 82	4
Watkin Terrace, 16	1
Weston Place, 9, 11, 13	3
Total	163

TABLE 84. NORTHAMPTON, 1913.

SUMMARY OF ROUTINE WORK CARRIED OUT BY THE INSPECTORS OF THE
DEPARTMENT DURING THE YEAR.

Total Number of Inspections and Visits	10,249
Nuisances reported by the Sanitary Inspectors	2,368
Nuisances reported by Residents	183
Nuisances abated	2,322
Statutory Notices served	751
Inspection of Houses after complaint of Nuisance	295
Drains tested with the Volatile Test	37
Drains tested with Water	12
Drains reported choked, and subsequently disinfected and amended...	133
Drains repaired, and Gullies substituted for Bell-traps.....	97
New Pans fixed to Closets	35
Closets supplied with flushing apparatus	15
Accumulations of manure and offensive refuse removed	10
Animals kept so as to be a nuisance, removed	2
Animals kept in contravention of the bye-laws, removed and con- ditions altered.....	7
Houses cleansed and whitewashed (total number)	638
Houses disinfected and cleansed after certificate of Medical Officer of Health (Infectious Diseases Prevention Act, 1890).....	454
Dilapidated Houses repaired	199
Houses unfit for habitation, reported to Medical Officer of Health...	30
Overcrowding in Houses abated.....	33
Yard Pavings relaid and repaired	183
Spoutings repaired or renewed	142
New slop sinks fixed.....	56
Visits to houses in which communicable diseases existed (including Tuberculosis)	2,294
Premises where food is produced or stored (slaughter-houses, milk- shops, bakehouses, &c.) inspected	1,184

TABLE 84.—*Continued.*

Such premises found defective in sanitation	89
Workshops and factories inspected (excluding bakehouses).....	253
Such premises where sanitary defects were found.....	30
Domestic Workshops inspected	263
Such premises where sanitary defects were found	45
Houses supplied with Town Water	1
Miscellaneous duties (visits under Shop Hours' Acts, Smoke observations, inspection of courts, canal boats, and common lodging houses ; and special duties)	283
Total Number of Houses inspected during the Year	2,159

TABLE I.

Vital Statistics of Whole District during 1913 and previous Years.

COUNTY BOROUGH OF NORTHAMPTON.

Year.	Popula- tion esti- mated to Middle of each Year.	Births.			Total Deaths registered in the District.		Transferable Deaths.‡		Nett Deaths belonging to the District			
		Un- corrected Number.	Nett.		Number *	Rate.	of Non- residents registered in the District.	of Resi- dents not registered in the District	Under 1 Year of Age		At all Ages.	
			Number.	Rate					Number. *	Rate per 1000 Nett Births.	Number. *	Rate.
1	2	3	4	5	6	7	8	9	10	11	12	13
1908	89223	2043	2043	22.9	1192	13.4	93	32	198	96.9	1131	12.8
1909	89534	1957	1957	21.9	1332	14.9	84	46	215	109.9	1294	14.4
1910	89843	1900	1900	21.1	1177	13.1	84	36	209	110.0	1129	12.6
1911	90152	1930	1931	21.4	1240	13.7	86	46	250	129.5	1200	13.3
1912	90467	1932	1935	21.4	1172	12.9	120	45	140	72.3	1097	12.1
1913	90793	1868	1868	20.6	1233	13.58	114	61	175	93.68	1180	13.00

NOTES TO TABLE I.

This Table is arranged to show the gross births and deaths in the district, and the births and deaths properly belonging to it with the corresponding rates. For years before 1911, some of the corrected rates probably will not be available. The rates should be calculated per 1000 of the estimated gross population. In a district in which large Public Institutions for the sick or infirm seriously affect the statistics, the rates in Columns 5 and 13 may be calculated on a nett population, obtained by deducting from the estimated gross population the average number of inmates not belonging to the district in such institutions.

*In Column 6 are to be included the whole of the deaths registered during the year as having actually occurred within the district.

In Column 12 is to be entered the number in Column 6, corrected by subtraction of the number in Column 8, and by addition of the number in Column 9. Deaths in Column 10 are to be similarly corrected by subtraction of the deaths under 1, included in the number given in Column 8, and by addition of the deaths under 1 included in the number given in Column 9.

‡“ Transferable Deaths ” are deaths of persons who, having a fixed or usual residence in England or Wales, die in a district other than that in which they resided. The deaths of persons without fixed or usual residence, *e.g.*, casuals, must not be included in Columns 8 or 9, except in certain instances under 3 (*b*) below. The Medical Officer of Health will state in Column 8, the number of transferable deaths of “ non-residents ” which are to be deducted, and will state in Column 9 the number of deaths of “ residents ” registered outside the district which are to be added in calculating the nett death-rate of his district.

The following special cases arise as to Transferable Deaths :—

(1) Persons dying in Institutions for the sick or infirm, such as hospitals, lunatic asylums, workhouses, and nursing homes (but not almshouses) must be regarded as residents of the district in which they had a fixed or usual residence at the time of admission. If the person dying in an Institution had no fixed residence at the time of admission, the death is not transferable. If the patient has been directly transferred from one such institution to another, the death is transferable to the district of residence at the time of admission to the first Institution.

(2) The deaths of infants born and dying within a year of birth in an Institution to which the mother was admitted for her confinement should be referred to the district of fixed or usual residence of the parent.

(3) Deaths from Violence are to be referred (*a*) to the district of residence, under the general rule ; (*b*) if this district is unknown, or the deceased had no fixed abode, to the district where the accident occurred, if known ; (*c*) failing this, to the district where death occurred, if known ; and (*d*) failing this, to the district where the body was found.

Area of District in acres (land and inland water)	3,432
Total Population at all ages	90,064
Number of inhabited houses	18,950
Average number of persons per house	4.75

(At Census, 1911 (c. Census, Vol. V.)

TABLE
COUNTY BOROUGH
Cases of Infectious Disease

NOTIFIABLE DISEASE.	NUMBER OF CASES NOTIFIED.							
	At all Ages.	At Ages†—Years.						
		Under 1	1 and 5	5 and 15	15 and 25	25 and 45	45 and 65	65 and up- wards
Small-pox .....	...	...	...	...	...	...	...	...
‡Cholera (C) .....	...	...	...	...	...	...	...	...
Plague (P) .....	...	...	...	...	...	...	...	...
Diphtheria (includ- ing Membranous Croup)	119	3	34	70	7	4	1	...
Erysipelas.....	64	2	1	4	5	25	19	8
Scarlet Fever	435	5	98	287	32	13	...	...
Typhus Fever ...	...	...	...	...	...	...	...	...
Enteric Fever	27	...	1	4	12	9	1	...
‡Relapsing fever (R)	...	...	...	...	...	...	...	...
Continued fever (C)	...	...	...	...	...	...	...	...
Puerperal Fever ...	2	...	...	...	1	1	...	...
Cerebro-spinal Meningitis .....	...	...	...	...	...	...	...	...
Poliomyelitis	5	...	4	...	1	...	...	...
Pulmonary Tuberculosis	220	...	1	22	73	89	33	2
Other Forms of Tuberculosis	84	...	14	29	23	13	5	...
Totals	956	10	153	416	154	154	59	10

NOTES.
* This space may be used for record of other diseases the notification (compulsory
† These age columns for notifications should be filled up in all cases where the Medical
‡ Specify the disease by initial against the figure.
Isolation Hospital or Hospitals, Sanatoria, &c.—(1) Harborough Road (Infectious
Total available beds—100. Sanatoria—County Sanatorium, Creton,

II.

OF NORTHAMPTON.

notified during the Year 1913.

TOTAL CASES NOTIFIED IN EACH LOCALITY. (e.g. Parish or Ward) of the District.												Total Cases removed to Hospital (Borough).
WARDS.												
I Abington	2 Castle	3 Delapre	4 Kingsley	5 Kingsthorpe	6 North	7 St. Crispin	8 St. Edmund	9 St. James'	10 St. Lawrence	11 St. Michael	12 South	
...
...
...
...
12	9	2	4	7	11	9	16	10	8	11	20	47
I	7	I	3	7	10	3	I	6	5	7	13	...
30	33	11	25	40	43	29	43	32	62	58	29	282
...
I	7	...	...	...	I	I	2	2	...	9	4	10
...
I	...	...	...	...	...	...	...	...	...	I	...	...
...
...	I	...	...	...	I	...	I	I	...	...	I	...
7	32	6	15	7	20	22	16	29	25	28	13	...
5	15	5	4	6	8	10	6	5	3	8	9	...
57	104	25	51	67	94	74	85	85	103	122	89	339

or voluntary) of which is in force in the district.

Officer of Health by inquiry or otherwise, has obtained the necessary information.

Disease). (2) Welford Road (Tuberculosis). (3) near Hardingstone (Small-pox).
Northamptonshire—40 beds.

NOTES TO TABLE III.

The classification and numbering of Causes of Death are those of the "Short List" on page XXV. of the Manual of the International List of Causes of Death, which should be consulted and followed in all cases of doubt.

(a) All "Transferable Deaths" of residents, *i.e.*, of persons resident in the District who have died outside it, are to be *included* with the other deaths in columns 2-10. Transferable deaths of non-residents, *i.e.* of persons resident elsewhere in England and Wales who have died in the District, are in like manner to be *excluded* from these columns. For the precise meaning of the term "transferable deaths," see footnote to Table I.

The total deaths in column 2 of Table III. should equal the figures for the year in column 12 of Table I.

(b) All deaths occurring in institutions for the sick and infirm situated within the district, whether of residents or of non-residents, are to be entered in the last column of Table III.

(c) All deaths certified by registered Medical Practitioners and all Inquest cases are to be classed as "Certified"; all other deaths are to be regarded as "Uncertified."

(d) Exclusive of Tuberculous Meningitis" (10), but inclusive of Cerebro-Spinal Meningitis.

(e) Title 19 should be used for deaths from Diarrhœa and Enteritis at all ages. (In the "Short List" deaths from Diarrhœa and Enteritis under 2 years are included under Title 19; those at 2 years and over being placed under Title 28.)

TABLE III.
COUNTY BOROUGH OF NORTHAMPTON.
Causes of, and Ages at Death during Year 1913.

CAUSES OF DEATH.					NETT DEATHS AT THE SUBJOINED AGES OF " RESIDENTS " WHETHER OCCURRING WITHIN OR WITHOUT THE DISTRICT (a).										Total Deaths whether of Residents or Non- Residents in Public Institutions in the District. (b)
					ALL AGES	Under 1 year	1 and under 2 years	2 and under 5 years	5 and under 15 years	15 and under 25 years	25 and under 45 years	45 and under 65 years	65 and up- wards.		
I					2	3	4	5	6	7	8	9	10	11	
ALL CAUSES	{ Certified (c)	1170	166	46	56	54	82	134	246	386	...				
	{ Uncertified	10	9	...	...	...	...	...	...	1	...
1. Enteric Fever		4	...	...	...	1	3	...	...	...	2
2. Small Pox ... ..		...	...	...	...	...	...	...	...	...	...
3. Measles		37	9	12	12	4	...	...	...	...	...
4. Scarlet Fever		6	...	...	3	3	...	...	...	...	2
5. Whooping Cough		5	4	...	1	...	...	...	...	...	...
6. Diphtheria and Croup		27	1	2	9	15	...	...	...	...	22
7. Influenza		10	...	...	1	1	1	1	5	1	2		
8. Erysipelas		1	...	...	...	1	...	...	...	...	1
9. Phthisis (Pulmonary Tuberculosis)		100	...	1	1	3	38	41	15	1	20				
10. Tuberculous Meningitis		14	...	1	4	7	1	1	...	...	4		
11. Other Tuberculous Diseases		12	1	1	...	2	4	4	...	...	9		
12. Cancer, malignant disease		94	...	...	...	...	...	5	47	42	17
13. Rheumatic Fever		7	...	...	1	...	3	3	...	...	1
14. Meningitis (See note (d))		9	...	...	3	5	...	...	1	...	...		
15. Organic Heart Disease		122	...	...	2	2	6	13	41	58	31		
16. Bronchitis		90	8	5	3	...	...	2	21	51	14		
17. Pneumonia (all forms)		57	12	6	7	1	6	6	12	7	13				
18. Other diseases of Respiratory Organs... ..		10	...	...	1	...	1	3	4	1	4		
19. Diarrhoea and Enteritis. (See note (e))		42	34	8	...	...	...	...	...	...	10
20. Appendicitis and Typhlitis		2	...	...	...	...	2	...	...	...	5
21. Cirrhosis of Liver		4	...	...	...	...	...	...	2	2	2
21a. Alcoholism		1	...	...	...	...	...	...	1	...	6
22. Nephritis and Bright's Disease		35	...	...	...	...	2	8	18	7	7
23. Puerperal Fever... ..		...	...	...	...	...	...	...	...	...	1
24. Other accidents and diseases of Preg- nancy and Parturition		5	...	...	...	...	1	4	...	...	2
25. Congenital Debility and Malformation, including Premature Birth		81	77	2	1	1	...	...	...	...	7
26. Violent Deaths, excluding Suicide		26	5	3	1	1	1	4	5	6	22				
27. Suicide		16	...	...	...	...	1	6	5	4	2
28. Other Defined Diseases		358	24	3	6	7	12	32	67	207	126				
29. Diseases ill-defined or unknown		5	...	2	...	...	...	1	2	...	2	
TOTAL ...					1180	175	46	56	54	82	134	246	387	334	
Sub- Entries included in above figures.	14(a). Cerebro-spinal Meningitis	...	...	...	...	...	...	...	...	...	...
	28(a). Poliomyelitis	1	...	1	...	...	...	...	...	...	...
	(b). Senile Decay	96	...	...	...	...	...	...	1	95	16
	(c). Apoplexy	80	...	...	...	...	1	3	22	54	9
* Sub-Entries should here be made for other deaths which it is desirable to distinguish, on account of their administrative importance or special interest (e.g., any deaths from Anthrax, Typhus or Glanders, which have been included under 28, <i>Other Defined Diseases</i> ; or deaths from pneumonia other than broncho-pneumonia which have been included under 17, <i>pneumonia all forms</i>).															

(See Notes, Pages 110 and 111.)

TABLE IV.

COUNTY BOROUGH OF NORTHAMPTON.

INFANT MORTALITY DURING THE YEAR 1913.

Nett Deaths from stated Causes at various Ages under One Year of Age.

CAUSES OF DEATH.					Under 1 week	1—2 weeks	2—3 weeks	3—4 weeks	Total under 4 weeks	4 weeks and under 3 months	3 months and under 6 months	6 months and under 9 months	9 months and under 12 months	Total Deaths under 1 year
ALL CAUSES	{ Certified	...	...	...	44	9	7	5	63	27	28	30	18	166
	{ Uncertified	...	...	...	9	...	...	...	9	...	...	...	...	9
Small-pox	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Chicken-pox	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Measles	...	...	...	...	...	...	...	...	...	...	1	3	5	9
Scarlet Fever...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Whooping Cough	...	...	...	...	...	...	...	...	...	1	3	...	...	4
Diphtheria and Croup	...	...	...	...	...	...	...	...	...	...	...	...	1	1
Erysipelas	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Tuberculous Meningitis	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Abdominal Tuberculosis (b)	...	...	...	...	...	...	...	...	...	1	...	...	...	1
Other Tuberculous Diseases	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Meningitis (not Tuberculous)	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Convulsions	...	...	...	...	2	...	...	...	2	...	2	4	2	10
Laryngitis	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Bronchitis	...	...	...	...	...	...	...	...	...	...	3	2	3	8
Pneumonia (all forms)	...	...	...	...	...	1	1	1	3	3	1	3	2	12
Diarrhoea	...	...	...	...	...	...	...	...	...	3	4	2 ⁶	...	9
Enteritis	...	...	...	...	...	...	1	1	2	5	6	9	3	25
Gastritis	...	...	...	...	...	...	...	...	...	1	...	1	...	2
Syphilis	...	...	...	...	...	...	...	...	...	1	...	...	...	1
Rickets	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Suffocation, overlying	...	...	...	...	...	...	...	...	...	1	1	1	...	3
Injury at Birth	...	...	...	...	2	...	...	...	2	...	...	...	...	2
Atelectasis	...	...	...	...	5	...	...	...	5	...	...	...	...	5
Congenital Malformations (c)	...	...	...	...	4	...	...	...	4	1	2	1	...	8
Premature Birth	...	...	...	...	31	4	3	3	41	1	...	...	...	42
Atrophy, Debility, and Marasmus	...	...	...	...	5	4	2	...	11	8	4	3	1	27
Other Causes	...	...	...	...	2	...	...	...	2	1	1	1	1	6
Total ...	...	...	...	...	51	9	7	5	72	27	28	30	18	175

Nett Births in the year { legitimate... 1779
illegitimate... 89

Nett Deaths in the year of { legitimate infants...
illegitimate infants } not known.

NOTES TO TABLE IV.

(a) The total in the last column of Table IV. should equal the total in column 10 of Table I., and in column 3 of Table III.

(b) Under Abdominal Tuberculosis are to be included deaths from Tuberculous Peritonitis and Enteritis and from Tabes Mesenterica.

(c) The total deaths from Congenital Malformations, Premature Birth, Atrophy, Debility, and Marasmus, should equal the total in Table III. under the heading Congenital Debility, and Malformation including Premature Birth.

Want of Breast Milk should be included under Atrophy and Debility.

(d) For references to the meaning of any other headings, *see* notes attached to Table III.

In recording the facts under the various headings of Table I., II., III., and IV., attention has been given to the notes on the Tables.

J. DOIG McCRINDLE,

Medical Officer of Health.

1914.

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